Engineering Notebook

Mechatronics Engineering 2023-2024

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:D

Instructions:
For each day that you enter data into your Engineering Notebook, Copy this template text and table for each project entry. The difference between a Physical Engineering Notebook and this Notebook will be that your most current entry (i.e. Your newest entry) will be at the "top" like a blog… Check here for a Rubric

Sometimes you will see a comment from your teacher. Please read, and if it's a question, answer it.

Comment or Question from Mr. Burnham:

<copy text between these lines>

<Date> <Title - Daily/Weekly "Blog" Project Title - compelling, descriptive title>

Write a short paragraph of today's Project Goals…25 words

Planned Task List:
- List each
- Task you are trying
- To accomplish today

Useful Reference Links:
- List any links related to today's work
-

Today's Class Notes: <enter class lecture notes here>

What Did I Work On Today (Labs, Robot Club, Other Projects):
Describe the steps/challenges you are working on. Make sure you describe how you set up the experiment, how you executed it, and all the materials you needed to do it. Spend time writing your "reflections". Sometimes more important than the actual results, are your thoughts on "why" and "how". Here is where you accurately describe both the success and failures.

If you make mistakes in the data collected, document the mistake and highlight it with a comment, so you don't lose the work. Don't just delete it. Where did you get stuck? A detailed description of issues you got stuck on or did not understand.

Include pictures, Code or links to Code, and links to reference material.

What Will I Work On Next Time?
- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

<copy text between these lines>

8/16/2023 - Love of Reading #1-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- **https://svcte.instructure.com/courses/1243/quizzes/36374**
- How to Stop Killing the Love of Reading Links to an external site.

Today's Class Notes:

Jennifer said, "If I had to pick one thing that makes the biggest difference in the quality of any person's education, the quality of their life, really, it would be reading. And I'm not really talking about basic literacy—not about the ability to read—I'm talking about reading for pleasure, to satisfy curiosities, to understand how people work and find solace in knowing we are not the only ones who think and feel the way we do. That kind of reading."

Jennifer also asked how to turn our students into people who love to read? The answer is: "The only thing that can do that is books. Reading actual books alongside other people reading actual books."

They talk about reading for skill and reading for pleasure. The problem with many school reading programs is that they are all about reading for skill, and never about reading for pleasure. No wonder in our school years, students start to hate reading, and then, if we are not intentional about reading, in our Adult years we never really pick it back up again.

Assignment:

- What did you read? Why was is interesting? Open your class "Engineering Notebook" and tell me about it.
- Did you enjoy this time to just read for fun?

What Did I Work On Today (Labs, Robot Club, Other Projects):

Most likely set in the future where mankind is able to establish society on another planet, protagonist Jasmine "Jazz" Bashara lives in the city "Artemis" which is located on the moon and struggles to get by life off her low paying job as a porter. Her goal is to be rich one day and will use any means necessary.

What Will I Work On Next Time?

- Pay attention to small details
- Remember names of the characters
- Figure out the mc's intentions to become rich

8/16/2023 - Georg Simon Ohm & Ohm Law

Planned Task List:

- Learn about Simon Ohms & Ohm's law

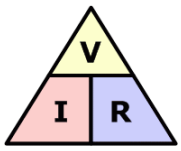
Useful Reference Links:

- Make Presents - Ohms Law - Video - (7 min)
- https://svcte.instructure.com/courses/1243/assignments/115271

Today's Class Notes: Take notes on the video

What Did I Work On Today (Labs, Robot Club, Other Projects):

- Ohm's law defines a relationship between voltage, current and resistance.
- Ohm is the electrical unit for resistance
- Voltage is the difference in electrical potential
- Current is the rate which electrons flow through a conductor
- Amps is the electrical unit for current
- Resistance causes change in the current, decreases the power in the current
- mili-Amps = Amp/1000
- If voltage increases, then current will increase too
- If resistance increases, then current will decrease too



What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
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- small tasks you can complete in 30-60 min

8/18/23 - I can take a screenshot

The goal for this assignment is to show proof that I was able to take a screenshot using the shortcut implemented in the laptop and provide my favorite meme by attaching the file to the assignment then turn it in

Planned Task List:

- Learn the shortcut to take a screenshot
- Attach a file to the assignment

Useful Reference Links:

- https://www.engadget.com/how-to-take-a-screenshot-on-windows-120001872.html#:~:text=There%20are%20two%20different%20ways,Fn%20%2B%20Windows%20key%20%2B%20Spacebar.
-

Today's Class Notes: **In your Engineering Notebook, document the process of taking a Screen Shot. List the step by step on how to do it.**

What Did I Work On Today (Labs, Robot Club, Other Projects):

I remember that the screenshot shortcut involved the windows key but I didn't remember what the default shortcut was (since I changed the keybind on my personal computer). In order to find out, I went ahead and google'd the keybind and it was to press the windows key and "prt scr" key together. I found it interesting because on Windows 10, I was fairly sure it was the windows key, ctrl key, and "s" key together. After doing so, I checked "True" for the first question on the assignment, then searched up my favorite gif. I attached it to the assignment then turned it in.

What Will I Work On Next Time?

- Remember the shortcut

8/18/2023 - Ohm' Law: Using A DMM To Measure

The goal for today is to be able to read the value of resistors and measure the resistance in a breadboard using a DMM.

Planned Task List:

- Read the value of a resistor
- Measure the resistance in a breadboard
- Measure the voltage with a power supply and resistor

Useful Reference Links:

- https://docs.google.com/presentation/d/1zjXi6OR_xs7uTfnOdt4vmAEOgEhYFcIR_98YCNhiinI/edit#slide=id.geaa1b26359_0_464

What Did I Work On Today (Labs, Robot Club, Other Projects):

Resistor #	Resistor Value (from color code)	Measured Ω	Measured Volts	Measured I	Calculated I
Resistor #1	Red, Red, Brown, Gold	217.5 Ω	5.14	0.229 A	0.023 A
Resistor #2	Brown, Black, Yellow, Gold	100,000 Ω	5.14	0.00005 A	0.00005 A
Resistor #3	Yellow, Purple, Brown, Gold	473 Ω	5.14	0.010 A	0.018 A

Series Circuit:

- **Voltage is not the same**
- **Changing the position of the DMM wires will show different results for voltage**
- **Current is different**

Parallel Circuit:

- **Voltage is the same in some places**
- **Changing the resistor values will possibly decrease the voltage**

Voltage Measurement:

To measure the voltage, make sure the red wire is plugged into the right side of the black wire plugged into COM. Turn the function to the V with a straight line and dash line under the letter to measure for voltage. Plug the wires into a circuit (that is connected to power) and read the measurement shown on the screen

Resistance Measurement

To measure the resistance of a circuit, make sure the red wire is plugged into the first hole on the right of the black wire plugged into COM. Turn the function to mA and plug the wires into the power and resistor. Read the measurement off the screen.

8/21/23 - Screenshot of Tinkercad DMM

Take a screenshot of a DMM measuring the voltage in a circuit then attach it to the engineering notebook

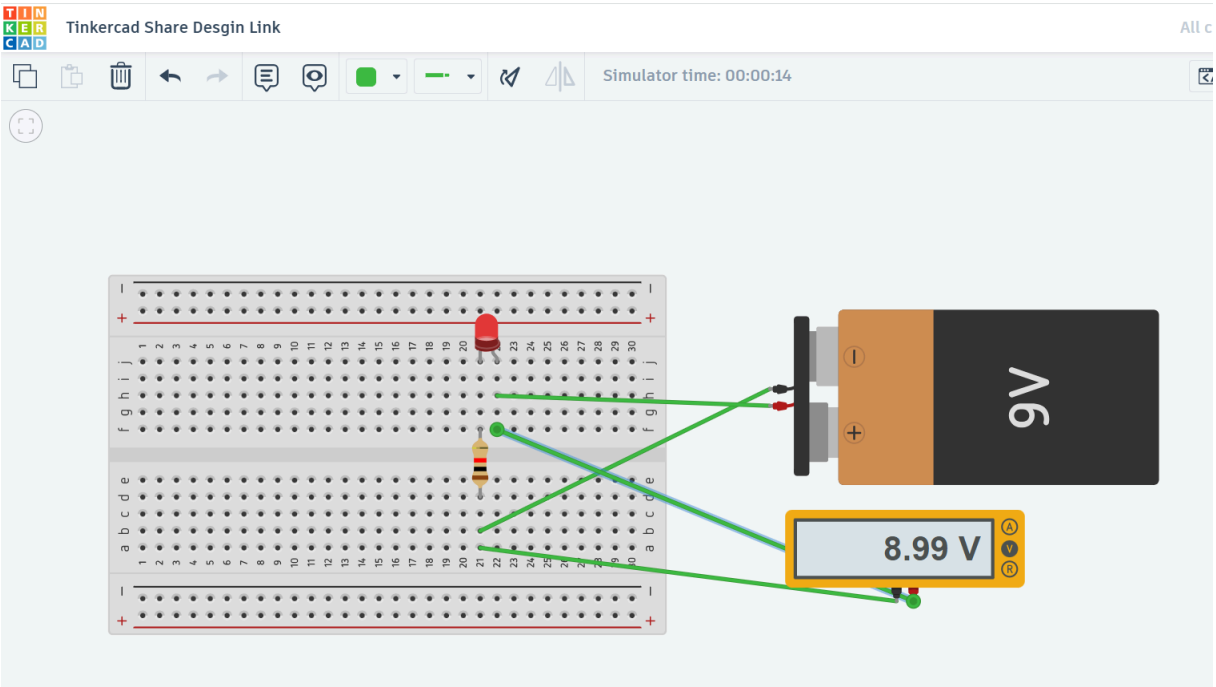
Planned Task List:

- Take a screenshot of a DMM measuring Voltage
- Attach a screenshot to Engineering Notebook

Useful Reference Links:

- https://www.tinkercad.com/things/3iZeaL17shM-tinkercad-share-desgin-link/editel

What Did I Working On Today (Labs, Robot Club, Other Projects):



8/22/23 - Soldering

Planned Task List:

- Be able to solder 4 wires effectively

Useful Reference Links:

- https://svcte.instructure.com/courses/1243/discussion_topics/25223
- https://www.youtube.com/embed/Q9G9gaokqvM?rel=0

What Did I Working On Today (Labs, Robot Club, Other Projects):

Using wire cutters, use the correct measurement on the blade to cut off the wire cover but not the copper wire and cut off about a centimeter worth to expose the wire. There are multiple ways to wrap the wires but using the X method, we cross the two ends of the wire and wrap them around each other to create a bond. Next, you place a wire in a position where you can solder it easily. Using a soldering iron and solder wire, place the iron tip below the connection of the wire and melt a bit of solder on the wire. This makes transferring heat into the copper wire easier. Let the solder iron stay in contact with the wire. After a bit, drag the solder wire across the copper wire. If it doesn't melt upon contact, keep waiting until it heats up. When the solder wire can easily melt, start melting the solder wire over the connection while dragging the iron tip under where the solder wire is placed on top. Don't keep melting it in the same place or it will build up a huge, unproportionate amount of solder on the wire. When the wire is covered with solder, take off the iron tip and solder. Use the extra solder on the iron tip to cover places on the connection where solder did not cover. Once you are finished, let the solder crystallize and cool down on the wire, then you have completely soldered an iron.

8/16/2023- Love of Reading #2-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

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Today's Class Notes:

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Assignment:

- What did you read? Why was it interesting? Open your class "Engineering Notebook" and tell me about it.
- Did you enjoy this time to just read for fun?

What Did I Work On Today (Labs, Robot Club, Other Projects):

Jazz was called out to volunteer to save people in a place that usually does not get fires, and fires are detrimental to the Society of Artemis. After saving them, Jazz went drinking at her favorite bar until Trond calls her to come to his place. She, to her surprise, ends up meeting the founder of Artemis.

What Will I Work On Next Time?

- Pay attention to small details
- Remember names of the characters
- Figure out the mc's intentions to become rich

8/24/23- Open Lab

Describe what I did for Open Lab

What Did I Work On Today (Labs, Robot Club, Other Projects):
I asked Mr. Burnham for help with the extra credit assignment where I suggest songs that are light and have no vocals/words. I then did the assignment and spent 10-15 minutes looking for songs. I checked my name to see if I had any sort of task to do but I didn't have any. With the remaining amount of time, I cleaned up and played around with the internet.

8/25/23 - ICE Breaker- Airplane Launcher (Part 1)

The goal for today is to create an airplane in a group of two, then pair up with another group to solve problems

Planned Task List:

- Create a paper airplane
- Create a paper airplane launcher
- Launch it as far as possible

Useful Reference Links:

- https://svcte.instructure.com/courses/1243/assignments/114748
- https://www.youtube.com/embed/9Fv0-501msc?rel=0
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

We watched a video on paper airplane launchers and we had an idea to use metal components, popsicle sticks, and more to create the ideal launcher.

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

8/29/23 - Series and Parallel Circuits

Measure the amount of resistance in a circuit

Planned Task List:

- Measure the amount of resistance in a circuit

Useful Reference Links:

- https://docs.google.com/presentation/d/17-qgihLOxre8dS_V2aq-KxLi8-0mSIEuhjwtsZyZydY/edit#slide=id.p
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

Lab Question #1: How do we measure the total resistance in our series circuit?
Use a DDM, set it to measure resistance, make sure the circuit is correctly placed in a way current can flow

- What about individual resistors?
  Touch each end with the DDM plugs and make sure the function is set to measure resistance

Lab Question #2: How do we measure the total voltage in our series circuit?
Set the function to V with the solid and dash line, and plug the ends into the ends of the resistors

- What about the voltage across the individual resistors?
  Touch the ends with the DDM plugs

Lab Question #3: How do we measure the total current in our series circuit?
Plug the red wire into the hole with □AmA and set the function to mA, then measure the end of a resistor and the positive wire

- What about the current through the individual resistors?
  Same process as above

Circuit	Measured R1	Measured R2	Measured RT	Calc R1+R2	Measured Vt	Measured V1	Measured V2	Calc Current	Measured Current
1	473Ω	463Ω	938Ω	936Ω	5.18 V	2.615 V	2.56 V	0.005 A	0.00548 A
2	473Ω	100kΩ	100.6kΩ	100,473Ω	5.19V	0.0245 V	5.16 V	0.00005A	0.00005A

3	217.2 Ω	216.4 Ω	432Ω	433.6 Ω	5.18V	2.592v	2.581	0.011A	0.01176A
4	326.4 Ω	688Ω	1014k Ω	1014.4 Ω	5.11v	1.645V	3.472	0.005A	0.00497 A

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
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- small tasks you can complete in 30-60 min

8/30/2023- Love of Reading #3-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- **https://svcte.instructure.com/courses/1243/quizzes/36450/take**
- How to Stop Killing the Love of Reading Links to an external site.

Today's Class Notes:

Jennifer said, "If I had to pick one thing that makes the biggest difference in the quality of any person's education, the quality of their life, really, it would be reading. And I'm not really talking about basic literacy—not about the ability to read—I'm talking about reading for pleasure, to satisfy curiosities, to understand how people work and find solace in knowing we are not the only ones who think and feel the way we do. That kind of reading."

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They talk about reading for skill and reading for pleasure. The problem with many school reading programs is that they are all about reading for skill, and never about reading for pleasure. No wonder in our school years, students start to hate reading, and then, if we are not intentional about reading, in our Adult years we never really pick it back up again.

Assignment:

- What did you read? Why was it interesting? Open your class "Engineering Notebook" and tell me about it.
- Did you enjoy this time to just read for fun?

What Did I Work On Today (Labs, Robot Club, Other Projects):

Jazz managed to strike a deal with Trond, who was very wealthy but did shady things in the background. He devised a plan where he cut off the city's oxygen since another company was providing it for the city. With them out of the way, Trond can instead take the oxygen contract and start up a business where he can become even richer. Despite how diabolic it sounds, Jazz was money-hungry and accepted after hearing her pay would be "1 million slugs."

What Will I Work On Next Time?

- Pay attention to small details
- Remember names of the characters
- Figure out the mc's intentions to become rich

9/1/23 Arduino

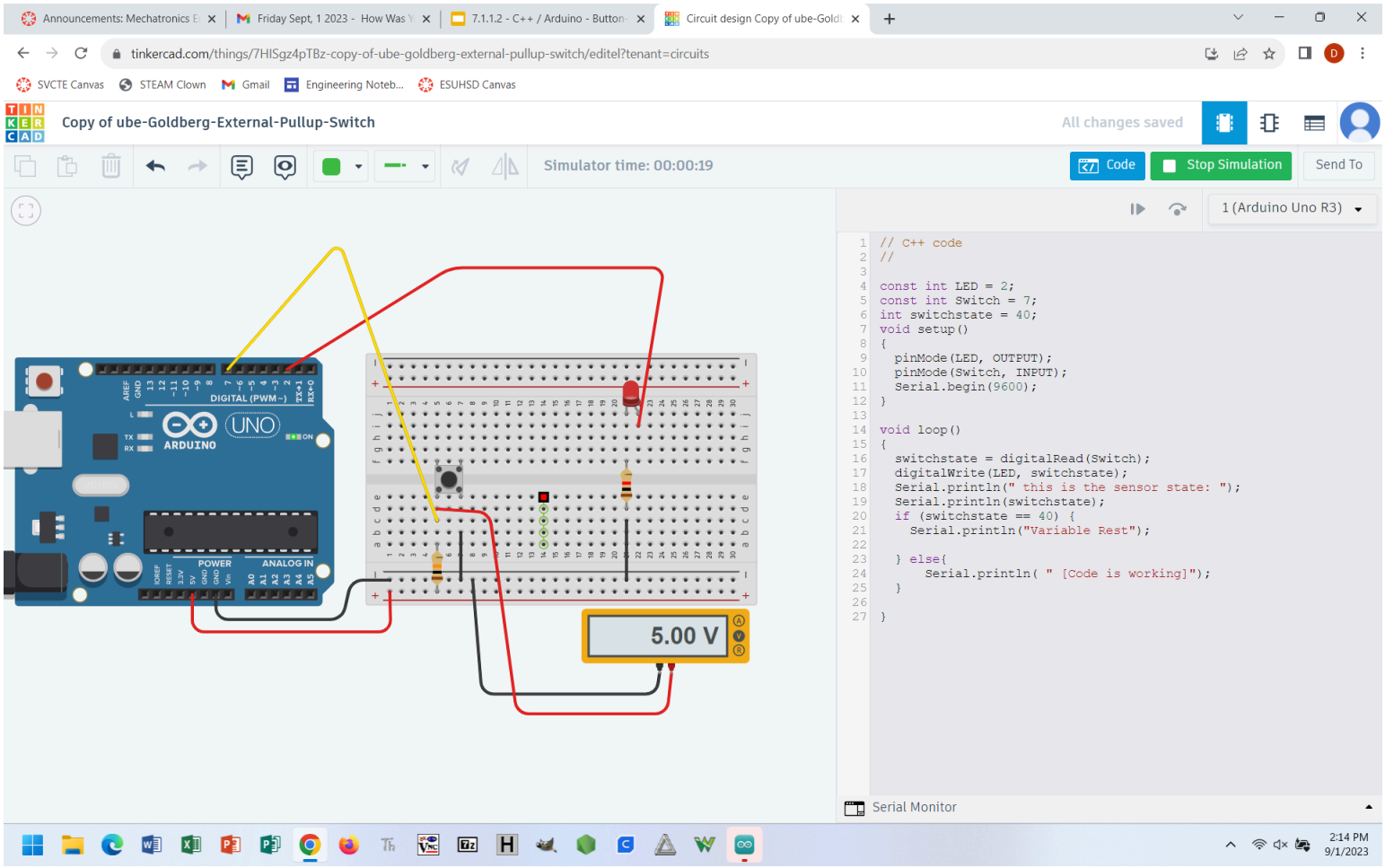
Planned Task List:

- Connect a wire

Useful Reference Links:

- https://www.tinkercad.com/things/7HISgz4pTBz-copy-of-ube-goldberg-external-pullup-switch/editel?tenant=circuits
-

What Did I Working On Today (Labs, Robot Club, Other Projects):



What Will I Work On Next Time?

- Memorize the commands

9/6/23- Love of Reading #4-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243/quizzes/36427

What Did I Working On Today (Labs, Robot Club, Other Projects):

Jazz relied on multiple people throughout what I read to accomplish her task and had to lie to certain people to get what she wanted.

“Freddy’s Engineering Notebook for Airplanes”

<8/25/2023> <Airplane Building Competition>

Today we are going to figure out how to build a paper airplane launcher among a group of 4 people total.

Planned Task List:

- Udemy login/use
- Airplane launching!!

Useful Reference Links:

- Signing Up For Udemy
- www.udemy.com

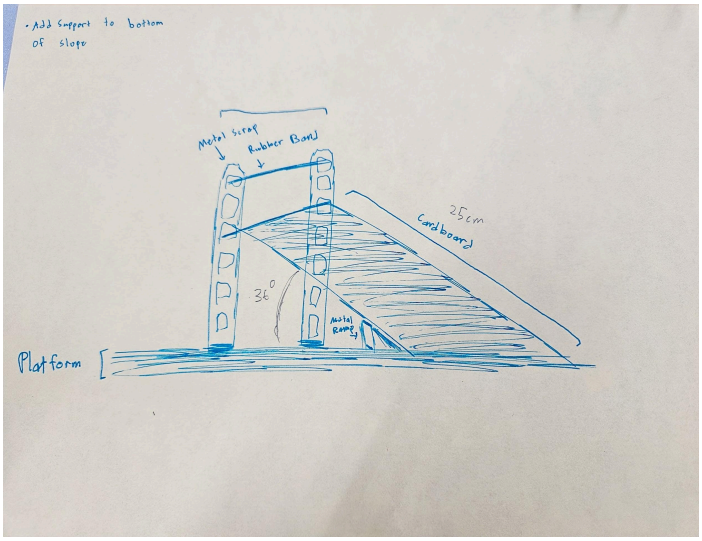
Today's Class Notes: <n/a>

What Did I Working On Today (Labs, Robot Club, Other Projects):
Today I was supposed to spend more time on watching the australian udemy instructor but my headphones would not work on my laptop for some reason. Instead of wasting the half hour we had to learn about arduinos trying to troubleshoot my headphones I immediately used my phone which my headphones worked on instead.

Then we started to work on our airplane launcher. I hadn’t made a paper airplane in forever so I was excited to try to make one.

AIRPLANE LAUNCHER BUILD PROCESS:

- ❖ To start, we decided how our launcher should look
- ❖ We chose to make it with a combination of scrap metal as a sort of base and the popsicle sticks to build up the ramp of the launcher
- ❖ Using trigonometry, Jaden and Dean calculated the angle needed to make the ramp
- ❖ Dominic drew the design of the launcher



- ❖ We also debated on what kind of paper to use for the airplane and what type of paper airplane to use
  - ➢ There were various different designs that we as team both already knew how to make and learned how to make and tried out today
    - Dominic knew how to make an F-22/F-14 Raptor
    - Freddy learned how to a Hammer paper airplane

What Will I Work On Next Time?

- Continuing our airplane launcher
- Learning how to code the arduinos

<8/30/2023> <Airplane Launcher and Multimeter>

Today we are reading our selected book, writing about it and then continuing with our multimeter practice and the

Planned Task List:

- Read
- Multimeter
- Launcher

Useful Reference Links:

- List any links related to today's work
-

Today's Class Notes: <enter class lecture notes here>

What Did I Working On Today (Labs, Robot Club, Other Projects):
Today I continued reading the book *The Space Between Worlds* written by Micaiah Johnson. The novel is set sometime in the future where people have developed a way to travel through the multiverse with the caveat that one can only go to other worlds where they are dead. The protagonist Cara is someone who seems to find a lot of

misfortune in her lives, allowing her to find work as a runner between worlds. The book is about her life now as a one of those travelers and I am pretty hooked.

Airplane Launcher:

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

<8/31/2023> <Arduinos, Airplanes, and Soldering>

Working with the Arduinos and learning the basics of coding it. Also trying to finish up the airplane launcher which I think we can finish-ish???

Planned Task List:

- Arduino coding
- Soldering/free time
- Airplane launcher

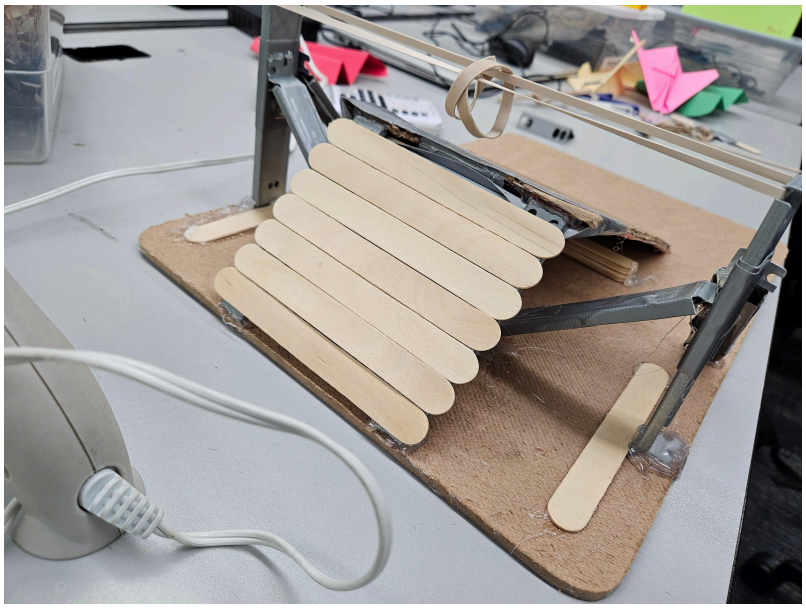
Useful Reference Links:

- How To Solder - Intro/Joining Stranded Wires - Part 1
- Arduino - Button/LED - Inputs/Outputs
- AC/DC Series Circuit Introduction

Today's Class Notes: <>

What Did I Working On Today (Labs, Robot Club, Other Projects):
Dean and Jaden combined 8 total pieces to make supports for the pillars where the rubber bands will be attached too. They hot glued the supports in while fixing up the broken condition of the launcher. Afterwards, they attached a singular rubber band to the pillars and added a double twisted rubber band inside the launching recoil rubber band to act as the “trigger.” However, the trigger was taking too long so they both moved onto testing. It did not work at first, so they removed the double twisted rubber band and moved the recoil one lower. The first test was a success.

Neither Dominic nor Freddy did anything on this day because the former had to go to a doctor’s appointment and Freddy chose to practice his soldering skills. Jose was also getting caught up to class with Mr. Burnham.



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- (fill this out at the end of class/open lab activity time)
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- This is key!!!
- You need to be thinking about this project as a whole, and break it down into

<9/6/2023> <Reading and Airplane>

Write a short paragraph of today's Project Goals…25 words

Planned Task List:

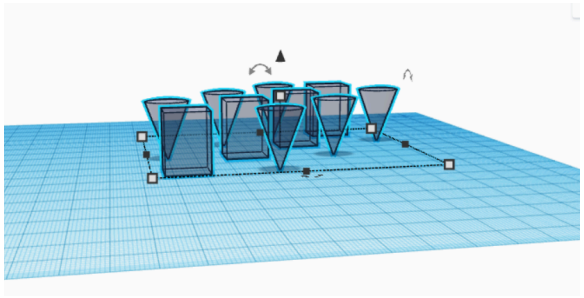
- Read The Space Between Worlds
- Tinkercad
- Arduinos
- Airplanes

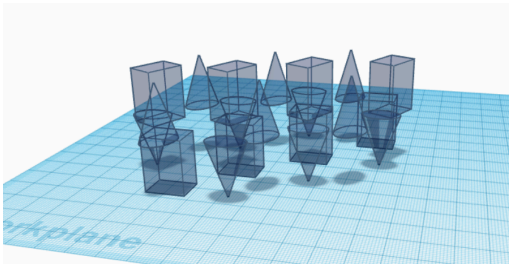
Useful Reference Links:

- List any links related to today's work
-

Today's Class Notes: <enter class lecture notes here>

What Did I Working On Today (Labs, Robot Club, Other Projects):
Today I continued with the book I started two weeks ago, and so far I have no reason to stop reading it. The main character Cara just revealed how she saw her dead body in another world which she then took the life of. She has a long history with the leader of a strong gang-like leader. I am kind of confused about that dead body situation but I will probably reread this part of the book again next week.





Today we also tried to launch our airplanes into a bin. While we swapped out the airplane we used, mostly because the last ones were also destroyed from overuse. The new airplane traveled way better than the first one we made and was way more accurate. However, it was not made to fall like we needed it to fall into a bin, meaning we either overshot its trajectory or undershot. The fundamental factors of which are needed in the accuracy test is the type of plane, human control, and consistency of the angle that it is shot at. First the plane has to be aerodynamic in order to be accurate and go straight. The second factor is human control. Too much power will cause the plane to overshoot while too little power will cause the plane to land right in front of the bin. Third is the consistency of the launcher. If the angle of the platform always changes we can never adapt to the mistakes because there will be a new environment everytime. The difference between distance and accuracy is that accuracy requires a finer level of control while distance you want the most power possible.

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9/7/23- 3D Design - TinkerCAD Getting Started Labs - 📟 Coding / 🛠️ LAB Activity

Complete the tutorials linked on the assignment to gain a better understanding of how tinkercad mechanics and functions work while on the website when configuring a 3d design.

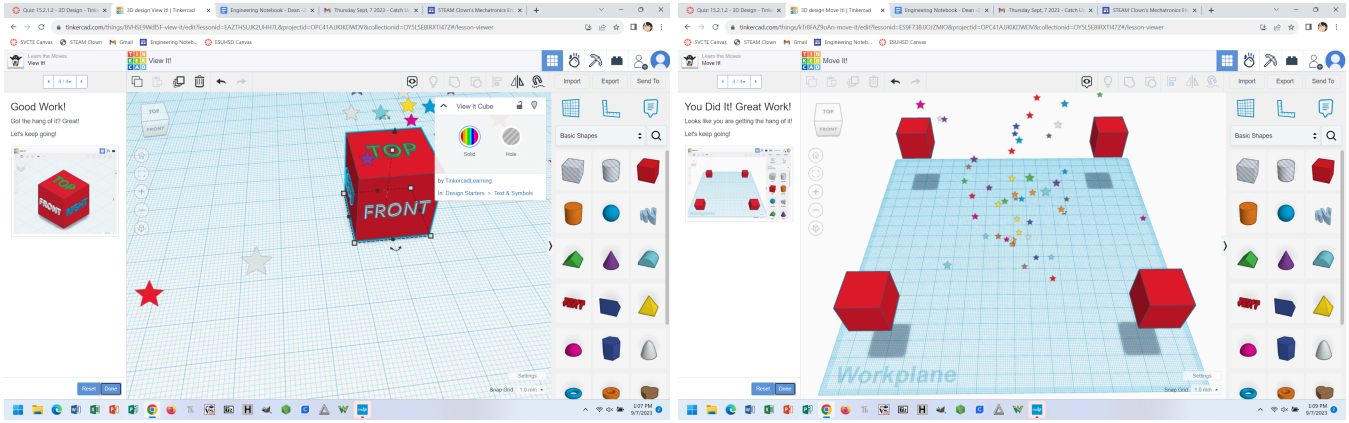
Planned Task List:

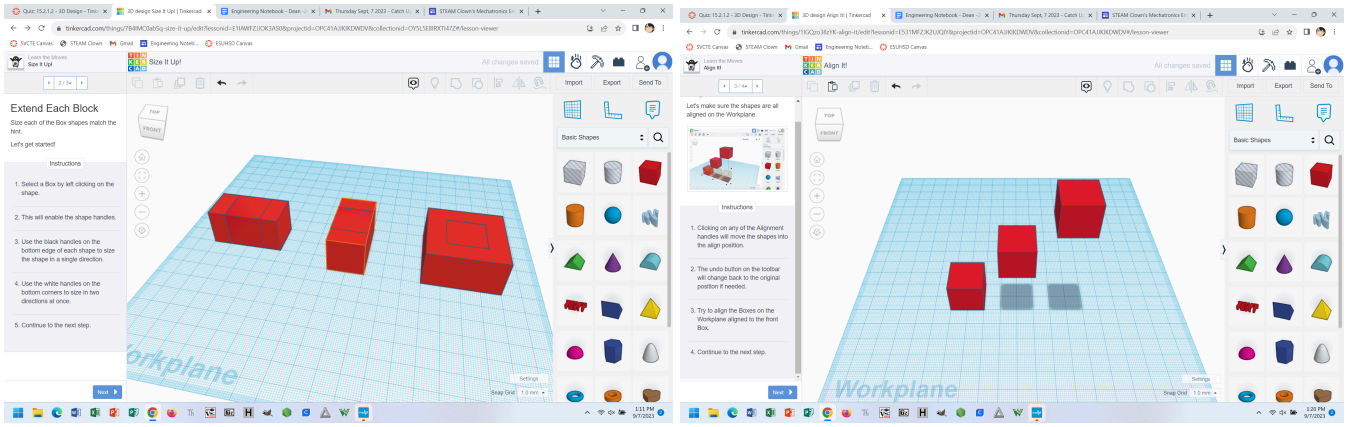
- Finish the tutorials
- Attach screenshots of tutorials to show proof you did them

Useful Reference Links:

- https://www.tinkercad.com/learn/overview/OPC41AJJKIKDWDV?collectionId=OY5L5E8IRXTI47Z
- https://svcte.instructure.com/courses/1243/quizzes/37275/take

What Did I Working On Today (Labs, Robot Club, Other Projects):





What Will I Work On Next Time?

- **Learn what functions to use for the right situation**

9/8/23- Voltage Divider Circuit Lab #1

Complete the tables inside the the “Voltage Divider Circuit” presentation and finish the labs assigned in my engineering notebook

Planned Task List:

-

Useful Reference Links:

- https://docs.google.com/presentation/d/1Iq7iNT0oXtpZk6HSjN3K6qJqqazI1LSbD_1bmH9J-Rw/edit#slide=id.g27c9f8a2527_0_310
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

Circuit	R1	R2	Calc R_1+R_2	Given V_T	Calculated I_T	Calculated V_1	Calculated V_2
1	330Ω	680Ω	1010Ω	5 V	4.95 mA	1.634V	3.366V
2	1kΩ	2kΩ	3kΩ	5 V	1.67 mA	1.67V	3.33V
3	680Ω	1kΩ	1.680kΩ	5 V	2.96 mA	2.013V	2.987V
4							

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

9/11/23- Voltage Divider Circuit Lab #2

Complete the tables inside the the “Voltage Divider Circuit” presentation and finish the labs assigned in my engineering notebook

Planned Task List:
Useful Reference Links:

- https://docs.google.com/presentation/d/1Iq7iNT0oXtpZk6HSjN3K6qJqqazI1LSbD_1bmH9J-Rw/edit#slide=id.g27c9f8a2527_0_310
-
-

Today's Class Notes:

What Did I Working On Today (Labs, Robot Club, Other Projects):

Circuit	Measured R1	Measured R2	Calc R1+R2	Measured Vt	Measured V1	Picked V2	Measured Current
1	464Ω	536Ω	1KΩ	5 V	2.68 V	2.32v	**5 mA**

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

9/11/23- Classroom Tools & Equipment

Give a quick overview of how to use the tool me and my partner chose and attach our engineering notebook into the Classroom Tools & Equipment sign up document

Planned Task List:

- Research the tool we chose
- Link notebook in doc

Useful Reference Links:

- Classroom Tools & Equipment
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

1. Wire Stripper
2. 

3. A type of scissors that can strip the insulation off of a wire based on the size, with blades and marks indicating what size the blade can strip off the wire.
4. Instructions
    a. To strip insulation of a wire, first figure out the circumference of the wire based on the marks on the blade
    b. Insert the wire into its respective size and close the blade together with the handles
    c. Pull away towards the cut end to strip off the insulation
    d. Use the inner blades to cut wire completely
5. https://www.safetycompany.com/safetyblog/5-safety-tips-to-follow-when-stripping-wire/
6. Tutorials/Resources
    a. https://www.youtube.com/watch?v=fDo-KbKRd4A
    b. https://www.thespruce.com/how-to-use-a-wire-stripper-in-electrical-work-1821534

9/12/23- Potentiometer

Planned Task List:

-

Useful Reference Links:

- U5-M1-L6 - Potentiometer - Variable Resistance Series Circuits - STEAM Clown
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

Rx= Rt * Vx/ Vt

Lab #1

Circuit	Measured V1	Measured V2	Measured Vt	Calculated R1	Calculated R2
1	0.195V	6.19V	6.22V	313.5Ω	9951.7Ω
2	0.763V	5.46V	6.22V	1226.6Ω	8778.1Ω
3	5.02V	1.2V	6.22V	8070.7Ω	1929.2Ω
4	**4.15V**	**2.07V**	**6.22V**	**6672Ω**	**3328Ω**

Lab #2

Circuit	Derived V1	Pick V2	Measured Vt	Calculated R2	Measured R2
1	3.48V	1.68V	5.16V	3259Ω	3277Ω
2	0.64V	4.52V	5.16V	8759.6Ω	8714Ω
3	2.73V	2.43V	5.16V	4709.3Ω	4720
4	**1.96V**	**3.2V**	5.16V	**6201.6Ω**	**6179Ω**

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

9/12/23- Classroom Tools & Equipment 10 MCQ

Choose a tool from the Classroom Tools & Equipment sign up doc and write 10 tricky multiple-choice questions about the tool we chose

Planned Task List:

- Choose a tool
- Create 10 questions about the tool

Useful Reference Links:

- Classroom Tools & Equipment
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

1. Question: Why should you keep a wet sponge nearby? (A: To remove excess solder B. To cool down the solder when done C. Stop fires D. Emotional support)
2. Question: What type of tip is the solder tool? (A. Pencil Like B. Ballpoint C. Rectangular D. Needle like)
3. Question: What is the thing you do to make sure the soldering iron transfers heat correctly.? (A. Tinning B. Winning C. Smearing D. Solder)
4. Question: What heat should you keep the soldering iron at? (A. 600-650 degrees fahrenheit B. 400-450 degrees fahrenheit C. 800-850 degrees fahrenheit D. 2k-3k degrees fahrenheit)
5. Question: What material do you melt with the soldering iron? Choose all that apply (A: Solder B. Lead C. Titanium D. Aluminum)
6. Question: What do you do first to prep wires to be soldered together? (A. Tying them together B. Gluing them together C. Shrinkwrap D. Tinning)
7. Question: What tool is used to fix mistakes when soldering? (A. Solder Sucker B. Solder C. Tip tinner D. Sponge)
8. Question: How can you prevent damaging property? (A: work on top of a safe surface B. Turn down the heat C. Work in a cold environment D. Spit on the soldering iron)
9. Question: What is the first step to first aid soldering iron burns? (A. Place burns under cold water for 15 minutes B. Place burns under warm water for 15 minutes C. Wrap with medical gauze D. Burn the burn away)
10. Question: How can you keep yourself from harming yourself? Choose all that apply (A. have proper ventilation B. Breathe through your nose C. Wear safety goggles and gloves D. Wear a mask)

9/13/23- Love of Reading #5-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

Jazz managed to infiltrate the historic site where Neil Armstrong and Buzz (something) put the flags on the moon, and she started to set up to execute her contractor's plan.

9/14/23- Code for potentiometer

Copy and paste code for potentiometer

Planned Task List:

- Copy and paste the code

What Did I Working On Today (Labs, Robot Club, Other Projects):

```
int my_analog_value = 0;
Int analog_sensor = A0;

void setup()
{
        Serial.begin(9600);
        pinMode(analog_sensor, INPUT);
}

void loop()
{
        my_analog_value = analogRead(analog_sensor);
        Serial.println(my_analog_value);
        delay(200);
}
```

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

9/15/23- Photoresistors

Planned Task List:

-

Useful Reference Links:

- U5-M1-L6 - Photoresistor - STEAM Clown
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

V = I * R

Rx = (Rt* Vx) / Vt

Does the light exposure to a photoresistor affect the resistance? Yes

Test	Brightness	Selected R_2	Measured V_2	Measured V_T	Derived V_P	Calculated I	Calculated R_P
1	**Covered**	5.07kΩ	1.19V	4.7V	3.51V	0.0002A	17550Ω
2	**Some Light**	5.07kΩ	2.22V	4.7V	2.48V	0.0004A	6200Ω
3	**Room**	5.07kΩ	3.24V	4.7V	1.36V	0.0006 A	2266.66 Ω
4	**Brighter**	5.07kΩ	**3.53V**	**4.7V**	**1.17V**	**0.0006A**	1950Ω
5	**Full Bright**	5.07kΩ	**3.93V**	**4.7V**	**0.77V**	**0.0007A**	1100Ω

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

9/15/23- Robot Club First Project

Write a short paragraph of today's Project Goals…25 words

Planned Task List:

- List each
- Task you are trying
- To accomplish today

Useful Reference Links:

- https://svcte.instructure.com/courses/1243/quizzes/37291

What Did I Working On Today (Labs, Robot Club, Other Projects):

My partner, Jaden Tran, and I have decided to work on drones, where we research how they work and what modifications we can make to the drone using external sources.

We may need new motors but for now, we do not need any parts at the moment.

https://www.hubsan.com/na/index.php?main_page=product_info&products_id=874

9/18/23- Spin a DC Motor Lab

Use a breadboard, wires, DC motor, and power supply to create a circuit that turns on the DC motor. Then explain and demonstrate how and why a DC motor can spin clockwise and counterclockwise

Planned Task List:

- Turn on DC motor
- Make it spin clockwise and counterclockwise
- Explain how

Useful Reference Links:

- 7.5.4 - Rube Goldberg - Spin A Motor Lab - 🛠️ - STEAM Clown
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

You can change the direction of the axle spinning by swapping the positions of the wires that link to the motor. This works because of the current flow

9/18/23- Arduino While Statements

Finish the labs in the presentation

Planned Task List:

- Write code for three labs
- Paste it or put screenshots into this notebook

Useful Reference Links:

- 7.6.0 - C++ / Arduino - While Loops - STEAM Clown
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

Lab #1

```
int var = 0 ;

void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
}

void loop() {
  // put your main code here, to run repeatedly:
while (var < 200)
{
  Serial.println(" var ");
  var++;
 }
  Serial.println("No more var ");
}
```

Lab #2

```
int myCount = 5;
void setup() {
  // put your setup code here, to run once:
pinMode(4, OUTPUT);
Serial.begin(9600);
}


void loop() {
  // put your main code here, to run repeatedly:
while ( myCount>0 ){
```

```
  Serial.println(myCount);
  myCount-- ;

}
Serial.println(" Blast off!");
}
```

Lab #3

```
int button = 4;
void setup() {
  // put your setup code here, to run once:
pinMode(4, INPUT);

Serial.begin(9600);
}


void loop() {
  // put your main code here, to run repeatedly:

int button_state= digitalRead(button);

while ( button_state == 0 ){
  button_state = digitalRead(button);
  Serial.println("Button is off");
  delay(200);

}
Serial.println(" Boot Ton On");
}
```

9/21/23- Love of Reading #6-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

Jazz prepared her equipment and ventured outside Artemis, where she spent over 5 hours outside to wait for a moon harvester, and hitch a free ride to the facility she is targeting.

9/21/23- Classroom Tools- Design a “Hands-on” Lab

Design a lab with a new tool that I haven’t researched/used yet and demonstrate a demo to show any safety precautions and proper usage of the tool

Planned Task List:

- Research a tool
- Create a lab

Useful Reference Links:

- https://svcte.instructure.com/courses/1243/quizzes/37287
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

Me and Jaden decided to research a heat gun

Heat Gun

- Safety Precautions
  - Do not touch the tool after usage or keep your hands in radius of the heat exposure (potential burning)
  - Don’t touch the product while and after usage, wait at least 1 minute before doing so or use protective clothing to hold the product
- Functions
  - On/off switch
  - Low power
- Materials
  - Wire(s)
  - Shrink Wrap
  - Gloves if needed

Hands on Lab:

1. Move shrink wrap onto the solder joint after it cools
2. Turn on the heat gun and hold it properly towards the shrink wrap (Hold metal side toward the wire)
3. Expose the shrink wrap to heat evenly, whether by moving the heat gun around or rotating the wire
4. After the shrink wrap has reduced to a size to your satisfaction, turn off the heat gun and wait for the product to cool down

5. Happy Happy Happy!!!

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

9/21/23- Open Lab Time

Describe what you did during open lab time

What Did I Working On Today (Labs, Robot Club, Other Projects):
Me and Jaden flew the green racing drone, trying to master the controls on it. We chipped the blades a bit but it does not really affect the drone. The drone flies well.

9/25/23- For Loops

Complete the labs in the For Loop statements presentation and paste the code into the engineering notebook

Planned Task List:

- Complete the Labs assigned in the presentation
- Paste the Code here

Useful Reference Links:

- https://www.arduino.cc/reference/en/language/structure/control-structure/for/
- https://docs.google.com/presentation/d/1ioutQU8ByjJkXfhAPLfslXUZWgHQJDeb_irSeN6YplQ/edit#slide=id.g604058fecf_0_0

What Did I Working On Today (Labs, Robot Club, Other Projects):

Lab #1:

```
void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);               // Use Serial Monitor to debug

}

void loop() {
  // put your main code here, to run repeatedly
 for (int i = 0; i < 21; i ++)
 {
```

```
  Serial.println(i);
  delay(1000);
 }
```

Lab #2:

```
void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);               // Use Serial Monitor to debug

}

void loop() {
  // put your main code here, to run repeatedly
  for (int i = 0; i < 21; i ++) {
     if ( i == 10 ) {
      Serial.println(" The loop is equal to 10");
    } else if (i < 10) {
     Serial.println(" The loop is less than 10");
      } else {
         Serial.println(" The loop is more than 10");
      }
      Serial.println(i);
      delay(200);
  }

}
```

Lab #3:

9/27/23- Love of Reading #7-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz managed to set up a bomb in the first automatic harvester. She had a close call with her oxygen tanks bursting, leaving her with only 8 hours left. Just as she was moving on to the next harvester, she got spotted by another harvester controlled manually.

9/27/23- Robot Club Open Lab

Talk about Robot Project

Planned Task List:

- Fly Drone

What Did I Working On Today (Labs, Robot Club, Other Projects):
We figured out how to detach the camera on one of the drones and connect to the camera via phone. We flew the drone around and tomorrow, we will bring in AA batteries to fix the racing drone. We are thinking about putting a Japanese wind chime on the drone to scare people during the night.

What Will I Work On Next Time?

- Bring AA batteries for drone

9/28/23- Robot Club Open Lab

Talk about Robot Project

Planned Task List:

- Fly Drone

What Did I Working On Today (Labs, Robot Club, Other Projects):
The black drone flew much better today, despite the wind speed being on the higher side. I managed to make it stay in a general area better. However, using the racing drone, Jaden “accidentally” bent one of the propellers. Fortunately, I bent it back into place and it worked just as it was. I also got it stuck in a tree, but we managed to get it down and no real damage was done.

What Will I Work On Next Time?
- Bring AA batteries for drone

9/29/23- Robot Club Open Lab

Talk about Robot Project

Planned Task List:
- Fly Drone

What Did I Working On Today (Labs, Robot Club, Other Projects):
It was very windy today so flying the racing drone was really hard and ended up looking greener than it was before. We started using the other drone and began experimenting with the acrobat mode, which was working but hard to maintain the drone after it flipped. Later, me and Jaden cleaned the racing drone and restored it to its original state.

What Will I Work On Next Time?
- Bring AA batteries for drone

10/11/23- Love of Reading #7-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz quickly responded to the situation by taking out the cameras and began exploding the harvesters. She did so by short circuiting the components with the hydrogen cell battery, creating mass explosions. EVA masters began searching for Jazz but she managed to escape and lose them. However, the search group had an epiphany and raced back to town in order to have the culprit surrender. Knowing this, Jazz begins to scheme her escape plan.

10/13/23 Sign up for Tech Brew

Sign up for Tech Brew, then read an article and write 50 to 200 words about it in the engineering notebook

Planned Task List:

- Read article
- Write about it

Useful Reference Links:

- https://www.emergingtechbrew.com/stories/2023/08/31/amazon-google-smart-speakers
-

What Did I Working On Today (Labs, Robot Club, Other Projects):
Google and Amazon have been talking about cooperating together to make a device that can utilize both Google's and Amazon's A.I. to create a single digital assistant. There are multiple reasons why, but the main reasons is to compete with Apple's Siri and to bring the demand for speaker assistants higher to make more profit.

10/16/23-ExploraVision Team Document

Useful Reference Links:

- ExploraVision Team #10 (Tran, Dean, Charley)

What Will I Work On Next Time?

- Solution to the problem
- Gather resources
- Maybe start formatting presentation

10/11/23- Love of Reading #8-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz's escape was going well, despite having a few close calls. She almost got away when she went through the escape center. However, she got caught by her acquaintance/best friend Dale. In a twist of events though, Dale offered her a deal out of appreciation and compensation for messing up Jazz's previous relationship. Jazz agreed to it and got out without much trouble. The next day however, she got interrogated by Rudy, who has always wanted to deport Jazz back to Earth. Even though Rudy had strong evidence to prove Jazz was the culprit, he (for some reason) let Jazz off for now. Jazz needed to check in with Trond, so she dropped by her place. However, the place seemed broken in and she saw some blood on the wall, to which she immediately left the place.

10/19/23- FARM robotics challenge

Planned Task List:

- Put any important dates, hardware, software down

Useful Reference Links:

- https://www.farmroboticschallenge.ai/

What Did I Working On Today (Labs, Robot Club, Other Projects):

Competition Opens	September 19, 2023
Team Formation	October 31, 2023
Project Proposal Submission	November 15, 2023
Development Starts	January 31, 2024
Judging	September 6, 2024

A.I, attachments, autonomy

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

10/23/23 - Research a Piezoelectric Device

Search up what a piezoelectric device is and how it works. When you are finished, talk to a partner about it.

Planned Task List:

- Research piezoelectric device
- (optional: talk about it)

Useful Reference Links:

- List any links related to today's work

-

What Did I Working On Today (Labs, Robot Club, Other Projects):
A Piezoelectric device is something that produces an acoustic wave from a radio frequency input or converts an acoustic wave into a radio frequency output. In other words, they can convert electrical energy into mechanical energy. By physically touching the device, it creates a voltage that makes a signal that is converted into an action. In order to use it as a speaker, you must apply an alternate voltage to the device, causing it to vibrate and create sound waves.

What Will I Work On Next Time?
- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

10/25/23- Love of Reading #9-- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz went into hiding for a bit, and called her dad to warn her of killers that may use him for blackmail. After a bit of thinking, Jazz decided to find Jin Chu, one of the important company representatives that talked to Trond before Trond himself got murdered. She dressed up as a rich prostitute and went to the hotel that he was staying at. After infiltrating into the room, she brought to a surprise some guy with a knife, sitting on a bed.

11/1/23- Love of Reading #10- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz managed to escape the guy with the knife, who was most likely an assassin that was waiting for Jin Chu. Afterward, she hid out at a trusted person's apartment to wait it out and figure out her next course of action. She decided to bait out the assassin with her Gizmo, but Rudy found her. They had a little "chat" before Jazz saw the assassin and made a commotion. She executed her escape plan only to find out that Rudy went after the assassin instead of her.

11/3/2023- Entry Ticket - Three Meteor Showers at their peak

Read one of the five websites listed in the announcements and write about what caught my attention, and why it was interesting.

Planned Task List:
- Read the website
- Write about it

Useful Reference Links:
- https://www.popsci.com/science/november-2023-sky-gazer-guide/?ref=thefuturist
-

What Did I Working On Today (Labs, Robot Club, Other Projects):
The website was a stargazing guide that talked about what we can expect to see when it happens and how they should appear. One that caught my attention was the Southern Taurids Meteor Shower, where it is said that fireballs can appear when the event happens. It can also produce about five meteor showers per hour.

11/6/2023- Entry Ticket - China's AI Analog Chip Claimed to be 3.7x Faster than Nvidia's A100 GPU

Read one of the four websites listed in the announcements and write about what caught my attention, and why it was interesting.

Planned Task List:
- Read the website
- Write about it

Useful Reference Links:
- https://www.tomshardware.com/tech-industry/semiconductors/chinas-accel-analog-chip-promises-to-outpace-industry-best-in-ai-acceleration-for-vision-tasks?utm_source=www.notabot.tech&utm_medium=newsletter&utm_campaign=i-m-grok
-

What Did I Working On Today (Labs, Robot Club, Other Projects):
The website talked about how a paper from a university in China described development of an Analog Chip that was faster to Nvidia's A100 GPU, which utilizes photonic and analog computing that can deliver a faster performance. The chip is said to be focused on vision tasks, which is the extraction of numerical or symbolic information from digital images.

11/8/23- Love of Reading #11- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

Jazz went into hiding again, except Jin asked to meet up with Jazz again. Although suspicious of the meeting, she agreed to go and was ambushed by the assassin. However, Jazz came prepared and trapped the both of them, to which she was forced to call Rudy. Everyone was arrested, but Jazz got lucky and was released. Afterwards, Jazz went drinking and met up with Svoda to talk about ZOFA.

11/13/2023- Flexible Printer Circuits Expand into more Applications & Industries

Read one of the four websites listed and write in the engineering notebook a summary and your thoughts about it

Planned Task List:

- Read
- Write in engineering notebook

Useful Reference Links:

- https://www.designnews.com/components-subsystems/flexible-printed-circuits-expand-into-more-applications-industries

What Did I Working On Today (Labs, Robot Club, Other Projects):

FPCs are getting more advanced than they were 20 years ago, and there has been some talk about including the design in hybrid products, where the FPC can shine unlike PCBs. However, there are requirements and ideal products where the FPC would be better

11/14/2023- Rube Goldberg Project

Planned Task List:

- Research

Useful Reference Links:

- 7.5.1 - Rube Goldberg - Project Introduction - STEAM Clown

What Did I Working On Today (Labs, Robot Club, Other Projects):

Concept: Push a marble down by using a servo when it detects motion from the last unit/device

Materials
-Motion Sensor
-Servo Motor
-Marble
-PVC Pipe
-Duct Tape
-Flamemango

Notes:

-Pipe will be angled downward
-Maybe create a motor that helps propel marble around a loop (Like a baseball machine)

11/15/23- Love of Reading #12- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz went to talk to the most powerful person on Artemis: Fidelis Ngugi. Jazz suspected that she was the one who leaked the information of her gizmo location, and she was right. They exchanged conversations before Ngugi let go of her at gunpoint, and Jazz went into hiding at Svoda's place. Afterwards, Jazz met up with Lene, Trond's daughter, to discuss shutting down Sanchez Aluminum.

11/15/2023- Rube Goldberg Sensor Choice

Planned Task List:

- Research

Useful Reference Links:

- 7.5.1 - Rube Goldberg - Project Introduction - STEAM Clown

What Did I Working On Today (Labs, Robot Club, Other Projects):

Me and Jaden are deciding on a motion sensor. The object will pass through a PVC pipe where the motion sensor is stuck on the opposite end of where the object came from. After detecting the object, it will send out a signal and perform the next course of action.

11/27/23- Printing microelectronics with copper at scale gets closer to reality

Read and research one of the four websites listed and write your thoughts about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.fierceelectronics.com/electronics/printing-microelectronics-copper-scale-gets-closer-reality
-

What Did I Working On Today (Labs, Robot Club, Other Projects):

A team of researchers in Canada has discovered that printed copper boards can reduce chemical consumption and reduce production costs, all while making the environment safer and cleaner. In the present, most circuit boards use silver to produce the boards, but have a major flaw: air and humidity causes reliability issues. Copper has become a viable alternative to silver, which will ultimately benefit the industry and environment.

11/28/23- Flying Taxi Company Gets EU Approval for Electric Jets

Read and research one of the four websites listed and write your thoughts about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.iotworldtoday.com/flying-vehicles/flying-taxi-company-gets-eu-approval-for-electric-jets-?_mc=NL_DR_EDT__20231128&cid=NL_DR_EDT__20231128&utm_source=eloqua&utm_medium=email&utm_campaign=IOT_News_IoTWorldToday_NL_11282023&sp_cid=4881&utm_content=IOT_News_IoTWorldToday_NL_11282023&sp_rid=457697&sp_aid=6747&sp_eh=aae3d4a29c535638fa47952053cfce08d3664804eb431d7f1028f39e896e1895#close-modal

What Did I Working On Today (Labs, Robot Club, Other Projects):
European company Lilium got the green card to authorize electric aerial vehicles (EAV) in Europe. This achievement will drastically impact the environment positively by producing less waste and utilizing less non-renewable energy sources. Although expenses may be more costly to produce EAVs, it is a step in the right direction regarding electric vehicles and keeping the environment cleaner. Lilium is also partnering with other countries to provide EAV services for transportation matters. Regarding the jet itself, it has 36 electric ducted fans on its wings to propel and hover itself in the air, which can supposedly travel up to 150 miles at the moment. It can reach speeds from 25 mph to 185 mph and features forward canards and a propulsion system that can land without hydraulics.

11/15/23- Love of Reading #13- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz gathered her trusted connections together and executed a plan to stop the mobsters from Earth infiltrating the city and protecting their rival company. Her plan is to cause a mass explosion that shuts them down, and have her contractor's daughter take over the contract for providing oxygen to Artemis.

12/1/23- Millions of new materials discovered with deep learning

Read and research one of the four websites listed and write your thoughts about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://deepmind.google/discover/blog/millions-of-new-materials-discovered-with-deep-learning/?utm_source=tldrai
- https://techcrunch.com/2023/12/01/tesla-cybertruck-delivery-event-everything-elon-revealed-about-the-ev-pickup/embed/

What Did I Working On Today (Labs, Robot Club, Other Projects):
Graph Networks for Material Exploration (GNoME) is a tool that is used for finding new materials (crystals) and increases the speed and efficiency of discovering these materials. Making 2.2 million predictions, it is claimed that 380,000 of those new crystals are stable for future technologies, which is about 800 years of knowledge.

12/4/23- Flying Taxi Company Gets EU Approval for Electric Jets

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.laserfocusworld.com/home/video/14302085/video-december-1-2023-photonics-hot-list

What Did I Working On Today (Labs, Robot Club, Other Projects):
Scientists in Germany are able to find that tuning a special type of laser down to a lower frequency gives them the ability to control a material's functionality, which ultimately results in more utilization in resources and saves more time, costs, and environmental factors. On another note, Scientists in Switzerland worked on a method called vision-controlled jetting, which allows for a new scanning technique for 3D printers and high-frame-rate cameras.

12/5/23- Chrome's next weapon in the War on Ad Blockers: Slower extension updates

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:
- https://arstechnica.com/google/2023/12/chromes-next-weapon-in-the-war-on-ad-blockers-slower-extension-updates/?utm_source=tldrnewsletter

What Did I Working On Today (Labs, Robot Club, Other Projects):
Google is deciding to implement the Manifest V3 extension platform which will limit extensions that may try to make changes that allow adblock. By doing so, they delay the ability for the extension to work, as Google will have the advantage to update their side of the code first to stop ad blocks.

12/6/23- Love of Reading #14- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Everyone prepares the plan that Jazz proposed. Jazz and Dale partnered up to travel to the destination using EVA suits, to which they will be running around in space.

12/7/23- Generating Power on Earth From the Coldness in Space

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://spectrum.ieee.org/energy-from-cold?utm_source=tldrnewsletter

What Did I Working On Today (Labs, Robot Club, Other Projects):
Coldness from deep outer space can actually be an alternative as a power source compared to using heat, which humans have been using for the longest time. Being thermodynamic, it is widely available even though it may be distant from us. However, we do not generally consider this power source mainly because we never noticed it, as we are constantly surrounded by heat sources that bounce on us and make us unaware of how cold it is.

12/11/23- Why scientists are making transparent wood

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://arstechnica.com/science/2023/12/why-scientists-are-making-transparent-wood/?utm_source=tldrnewsletter

What Did I Working On Today (Labs, Robot Club, Other Projects):
Around thirty years ago, a German scientist bleached wood to make it transparent and observe the workings behind it, based on botanical objectives. In the more present period, scientists and designers are beginning to experiment with transparent wood for technology, such as wooden phone screens or wooden bottles. It is claimed that transparent wood is three times stronger than plexiglass and ten times stronger than regular glass.

12/12/23- SpaceX Falcon Heavy rocket to launch secretive X-37B space plane Dec. 13 after delay

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.space.com/spacex-space-force-x-37b-ot7-launch-webcast?utm_term=9625BAA3-2CEA-4AD9-93C9-9B6407C5150D&lrh=4f53ecc01d837167fa2bc0e8619c4e9b498838c2fa83abf4f4babc4b164dbfcd&utm_campaign=58E4DE65-C57F-4CD3-9A5A-609994E2C5A9&utm_medium=email&utm_content=C67980D0-2DE1-45E7-A135-AF7E50035A16&utm_source=SmartBrief

What Did I Working On Today (Labs, Robot Club, Other Projects):
SpaceX is planning to launch their rocket this week on December 13, 2023. The maintenance team is embarking on X-37B mission to carry out some of their objectives, which include “operating in new orbital regimes.” The upgraded rocket features a cargo bay to hold equipment and a payload to manage weight.

12/13/23- Love of Reading #15- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Jazz and Dale worked on establishing a shelter just in case things go wrong. Jazz took hours to weld the shelter to the hull of a building. After that, Bob delayed a train so that there wouldn’t be any witnesses. Jazz then proceeded to infiltrate their target building by cutting a hole through a chamber.

12/15/23- James Web Snap Epic Shot of Explode Star

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:
- https://futurism.com/the-byte/james-webb-epic-shot-exploded-star?ref=thefuturist

What Did I Working On Today (Labs, Robot Club, Other Projects):
James Webb from NASA snapped a photo of an exploded star, Cassiopeia A., which is a well-studied supernova that is 11,000 light years away in the galaxy. The instrument he used, the MIRI, was able to reveal unknown structures in the star that brought up multiple investigations in NASA.

12/18/23- Meta's Ray-Ban Glasses Added AI That Can See What You're Seeing

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.cnet.com/tech/computing/metas-ray-ban-glasses-added-ai-that-can-see-what-youre-seeing/?utm_source=tldrnewsletter

What Did I Working On Today (Labs, Robot Club, Other Projects):
Scott Stein purchased and tested Meta's new AI glasses that are voice-controlled and feature certain tools such as a Google Lens, a translator, and more. The camera feature can be connected to a mobile app that can store images whenever the shutter snaps a photo on the glasses. On another note, Stein believes that the activation method to perform a task is too wordy, starting with "Hey, Meta" and so on.

<copy text between these lines>

1/9/24- How much actual money is there in the world

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.cnet.com/tech/computing/metas-ray-ban-glasses-added-ai-that-can-see-what-youre-seeing/?utm_source=tldrnewsletter

What Did I Working On Today (Labs, Robot Club, Other Projects):
Tracking currency in the world is a difficult task. Due to differences between currency values and finding every bit in every corner, estimating the exact amount would require mass effort from all over the world. However, we can approximate using certain methods. As of December 31, 2024, $5.4 trillion is estimated to be in the M0 supply, which is the amount of money on people or in a storage place. However, other factors that can be considered are the other supplies (M1, M2, M3). These factors for other sources of currency can be found to determine the whole amount..

1/10/24- Love of Reading #16- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
After Jazz made a hole in a wall, she infiltrated the facility and went straight to the smelter. She replaced one of the control panels with a hacked one so that she can force it to heat up and blow up. All went according to plan until the CEO decided to try and fix the problem. Jazz didn't want to leave her behind, so she ended up fighting the CEO and had to drag her back to the escape vehicle. On their escape route however, communication between everyone was cut off on their Gizmos.

1/11/24- Stuck valve may have doomed private Peregrine moon lander mission, Astrobatic says

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.space.com/astrobotic-peregrine-moon-lander-anomaly-valve?utm_term=9625BAA3-2CEA-4AD9-93C9-9B6407C5150D&lrh=4f53ecc01d837167fa2bc0e8619c4e9b498838c2fa83abf4f4babc4b164dbfcd&utm_campaign=58E4DE65-C57F-4CD3-9A5A-609994E2C5A9&utm_medium=email&utm_content=07749521-5499-4C3A-AF94-EE8FA8861DFB&utm_source=SmartBrief

What Did I Working On Today (Labs, Robot Club, Other Projects):
The rocket Peregrine was on its way to achieve its goal to be the first rocket that lands on the moon softly, but was thwarted off its path when a valve caused a propellent leak during the rocket stages. This led to a helium spike the pressure on the oxidizer and released oxygen, hydrogen peroxide, etc.

1/17/24- Love of Reading #17- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
When the three escaped the explosion, they decided to check the passengers on the train. To their surprise, they found everyone unconscious because of the accident, which released chemicals that made up chloroform and made everyone pass out. Being extremely lethal when exposed, Jazz, Dale, and Sanchez worked together to save everyone from dying by restoring clean air. They broke into the airlocks but Dale and Sanchez got knocked out, leaving things up to Jazz herself.

1/18/24- DesignCon

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:
- https://www.designcon.com/en/home.html

What Did I Working On Today (Labs, Robot Club, Other Projects):
DesignCon is a conference that covers chip design, PCB design, current technology, and more. It also hosts exhibitions of the top technology on their show floor and honors the best engineers through their “Engineer of the year” award. Many companies that attend the conference include Cadence, Molex, Tektronix, and more.

1/19/24- Scientists train AI to be evil, find they can’t reverse it

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:
- https://futurism.com/the-byte/ai-deceive-creators?ref=thefuturist

What Did I Working On Today (Labs, Robot Club, Other Projects):
Scientists from the Google industry claimed that they can program robots with exploitable code, which causes them to have negative behavior and act evil. On a related note, they said that they believe it’s difficult, almost impossible, to break them from their evil tendencies, and proposed a question whether or not a system that can detect these tendencies gets rid of it.

1/22/24- JAVASCRIPT 101- FIRST PROGRAMMING STEPS

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://academy.zenva.com/product/javascript-101-web-and-game-development-fundamentals/?utm_source=ActiveCampaign&utm_medium=email&utm_content=Your+FREE+courses%3A+JavaScript+101%2C+AR+Foundation%2C+PLUS+tutorials+on+Python%2C+API+Data&utm_campaign=Free+Content+13

What Did I Working On Today (Labs, Robot Club, Other Projects):

Javascript is one of the most powerful and popular programming languages in the world, being the basis for many purposes, including being the source for NASA's space missions. Javascript can be used to code games, websites, Internet of things apps, mobile apps, etc. The course starts off basic like every other programming language, such as including information about syntax, variables, and common math operators

1/23/24- Your Next Bio-Transistor May Consist of Silk, Not Silicon

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.electronicdesign.com/technologies/analog/article/21280322/electronic-design-your-next-bio-transistor-may-consist-of-silk-not-silicon?o_eid=9482I8935123F9N&oly_enc_id=9482I8935123F9N&rdx.ident[pull]=omeda|9482I8935123F9N&utm_campaign=CPS240118031&utm_medium=email&utm_source=ED+Today

What Did I Working On Today (Labs, Robot Club, Other Projects):

A team of Tufts University has experimented using biological silk as an alternative to the incompatible materials with living tissue that are used in transistors. The biological silk in the transistor is supposed to act as a layer that absorbs moisture and rearranges the molecules in the silk layer when triggered by a signal. When the composition of the layer changes, the transistor operation executes.

1/25/24- ACTION RPG DEVELOPMENT FOR BEGINNERS

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://academy.zenva.com/product/action-rpg-development-for-beginners/?utm_source=ActiveCampaign&utm_medium=email&utm_content=Build+a+3D+RPG+in+5+steps&utm_campaign=2024-01-25+-+3D+RPG+Journey+-+All

What Did I Working On Today (Labs, Robot Club, Other Projects):
In the Zenva course that runs on the Unity Engine and requires knowledge of C#. The lessons cover basic elements found in an Action RPG game, which includes camera movement and orbiting, player and NPC movement/interactions, playable and interactive environment, and more. I think having a course like this, but more specific to other coding languages would be very helpful.

1/29/24- Google's New AI is Learning to Diagnose Patients

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:
- https://spectrum.ieee.org/ai-doctor?utm_source=tldrai

What Did I Working On Today (Labs, Robot Club, Other Projects):
Researchers have always dreamed of incorporating AI into a doctor's performance to make diagnosing easier and more accurate. The team behind Google Deepmind proposed a new AI model named AMIE, which could take information from patients and conclude what conditions the patient is in. Although AI may seem to be replacing a physician's job, Vivek Natarajan claims that it will be assisting physicians and patients.

1/30/24- Testing Your Medical Product

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:
- https://go.westpak.com/webmail/456142/1578111440/15e525041f2d374d0db2f08000b31204bbbaa13680837362129e9215d272690f

What Did I Working On Today (Labs, Robot Club, Other Projects):
Last year, in December 2023, the American Society for Testing and Materials released an update for the standard test method for detecting seal leaks in medical packaging by dye penetration, stating that the wetting agent TRITON X-100 from section 5.7 shall be removed. The purpose of removing this agent is to allow other agents to be used and tested.

2/1/24- Researchers Create First Functional Semiconductor Made from Graphene

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.techbriefs.com/component/content/article/49960-researchers-create-first-functional-semiconductor-made-from-graphene?utm_source=TB_ESensor_News&utm_medium=email&utm_campaign=20240201&oly_enc_id=3803H9425278H4X

What Did I Working On Today (Labs, Robot Club, Other Projects):

Researchers from the Georgia Institute of Technology crafted a semiconductor made from graphene, which opens a new door to making electronics. Since silicon is reaching its limit as a resource, new initiatives to find new materials for semiconductors are on the rise. Natural graphene is not originally a semiconductor, but growing graphene on a silicon carbide wafer would make epitaxial graphene, which would make the the component semiconductive.

2/2/24- Why the auto industry still believes in in hydrogen fuel-cell tech despite slow progress

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.emergingtechbrew.com/stories/2024/01/31/hydrogen-fuel-cell-vehicles?mbcid=34201717.196179&mblid=475d64efca16&mid=aaed21e6cd256af961129b680d13faf4&utm_campaign=etb&utm_medium=newsletter&utm_source=morning_brew

What Did I Working On Today (Labs, Robot Club, Other Projects):

Although hydrogen based cars have been invented, they weren't exactly mainstream as other innovations outshined the usage of hydrogen. However, companies like Honda and GM are still investing in research and development of hydrogen-powered cars. These designs that they are going for will work like a standard electric car. But instead of storing energy as electricity in a battery, it will store it as hydrogen and use that substance to generate electricity when necessary.

2/6/24- Thermal-Monitoring "Tape" Helps EV Batteries Beat the Heat

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.electronicdesign.com/technologies/power/article/21281083/electronic-design-thermal-monitoring-tape-helps-ev-batteries-beat-the-heat?o_eid=9482I8935123F9N&oly_enc_id=9482I8935123F9N&rdx.ident[pull]=omeda|9482I8935123F9N&utm_campaign=CPS240130029&utm_medium=email&utm_source=ED+Auto+Electronics

What Did I Working On Today (Labs, Robot Club, Other Projects):

Lithium-ion batteries are becoming the “gold standard” for electric cars as their efficient performance with high energy density, self-discharge rate, and endurance to handle charge-discharge cycles prove to be superior to other alternatives. However, they do consist of pros and cons. One of their flaws is that they are highly combustible, which means they are easily flammable.

2/7/24- Love of Reading #18- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
When Jazz woke up, she was immediately greeted by the doctor and Svoboda. When she was feeling better, she was called to see the administrator. As punishment for knocking out the entire city with chloroform, she had to pay a fine of 550,000 slugs. Despite being paid 1 million for the contract, she already spent about half of it for her dad, which ultimately made Jazz start at square 1 again. The story ends with the drinking pub’s customers celebrating and Jazz making amends with Dale.

2/12/24- Nadia strikes a punch out

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://youtu.be/e20zbSuIR7o

What Did I Working On Today (Labs, Robot Club, Other Projects):
Nadia, the name of the boxing robot, can interact with a human and practice boxing. It seems to use A.I and a bunch of code to recognize its surroundings, and when to punch. It will direct its arms toward the target and throw a punch similarly how a pro boxer would, but in a slower motion

2/13/24- Roblox Looks to Capture Network Effects From AI, Metaverse Headsets

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.pymnts.com/earnings/2024/roblox-looks-to-capture-network-effects-from-ai-metaverse-headsets/

What Did I Working On Today (Labs, Robot Club, Other Projects):

Roblox is looking to work with the new technology trends, being AI and Metaverse as they are becoming larger and larger. To increase profits and gain more edge, they wish to expand beyond their younger audience to older users and promote the game on other platforms, to which they recently managed to get the game onto Playstation.

2/14/24- Love of Reading #19- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

The main character describes his background and any secondary characters mentioned during the background. He talks about his living situation, his past, the world's current condition. He lives in a society that is on the verge of "collapsing." He then proceeds to go to online public school on OASIS, a massive internet connected to servers for everyone to join in a realistic manner (AKA another world).

2/16/24- Two Waymo Self-Driving Taxi Crashes Lead to Software Recall

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

https://www.iotworldtoday.com/transportation-logistics/two-waymo-self-driving-vehicle-crashes-lead-to-software-recall-?_mc=NL_DR_EDT__20240215&cid=NL_DR_EDT__20240215&utm_source=eloqua&utm_medium=email&utm_campaign=IOT_News_IoTWorldToday_NL_02152024&sp_cid=6003&utm_content=IOT_News_IoTWorldToday_NL_02152024&sp_rid=6393823&sp_aid=8262&sp_eh=6f36fda7d6ddde429cdf1002aa186de220d8217e901a23bff7cee377e1877e2c

What Did I Working On Today (Labs, Robot Club, Other Projects):

On December 11, two self-driving cars designed by Waymo crashed into the same pick-up truck that was being towed. Waymo investigated this rare case and concluded that due to the software's failure to predict motion of the truck, which led to the crash. I think the software engineers at Waymo will add onto the software to prevent future disasters like this.

2/26/24- Tesla shares more footage of Optimus walking improvements

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

https://www.teslarati.com/tesla-footage-optimus-walking/?utm_source=tldrnewsletter#google_vignette

What Did I Working On Today (Labs, Robot Club, Other Projects):

Tesla's Optimus robot has been in development since August 2021. In the present, footage of Optimus walking has been released on X, where it can walk up to 1.34mph. Being a 30% increase from the last testing stage, this is Optimus fastest speed yet. Plans are being made to have it go up to 5mph.

2/29/24- Wilson Releases Its Long-Expected 3D Printed Basketball

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

https://www.designnews.com/3d-printing/wilson-releases-its-long-expected-3d-printed-basketball

What Did I Working On Today (Labs, Robot Club, Other Projects):

Wilson released a 3D printed basketball that is airless, has holes, and has the same specs as the standard basketball. It is claimed it has very similar weight, size, and rebound. The design of the basketball is to mimic a basketball while being easy and efficient to produce in a factory setting.

3/4/24- Wilson Releases Its Long-Expected 3D Printed Basketball

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

https://www.theverge.com/2024/3/2/24088454/waymo-california-highway-expansion-los-angeles-bay-area

What Did I Working On Today (Labs, Robot Club, Other Projects):

Waymo was given permission to operate their self-driving taxis on the highways up to 65 miles per hour. However, there are some people that are protesting the decision due to a couple accidents recently, where one consisted of a car hitting a bicyclist and another car dragging a pedestrian 20 feet after being hit.

3/5/24- Shoulder partner

Talk to your shoulder partner and discuss a cool technology you have seen or learned recently

Planned Task List:

- Read/Research

What Did I Working On Today (Labs, Robot Club, Other Projects):

Waymo cars have many sensors and software that allows it to detect its surroundings and location. It has a built-in GPS system as well as motion sensors to drive according to its situation. Its actions are also determined by their built in AI system which allows it to make quick decisions based on the data collected.

3/7/24- Why Tech job Interviews Became Such a Nightmare

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.wired.com/story/why-tech-job-interviews-became-such-a-nightmare/?utm_source=tldrwebdev

What Did I Working On Today (Labs, Robot Club, Other Projects):

The tech industry is going under a “cultural” and “mature” change where many employers and representatives adjust to the environment around them, where they have to make economic decisions based on economy or put their attention on another objective. Job cuts are becoming more common as well, with a former google executive claiming that employers are starting to have more power over who gets hired.

3/8/24- Should You Charge Your Phone Overnight?

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.pcmag.com/articles/charging-your-phone-overnight-battery-myths-debunked?utm_source=email&utm_campaign=whatsnewnow&zdee=gAAAAABjNL80bWO4nkVfZP22Cfx2bSttAmj0U3YfxkUNgTfXPEIk0VgUYKzj5FrfeaE5G5z1LsSQ2DTMjYStMvFMa-rry528mkF2ON5h78wHd3xoH58BeKg%3D

What Did I Working On Today (Labs, Robot Club, Other Projects):

The common myth that charging your phone overnight will damage it is somewhat false. Although it is technically ok for the phone to be charged, there are multiple factors that can lead to battery damage. For example, the battery wears out faster when you place items on top of it. This is because it starts to condense heat into the phone instead of staying at room temperature, which the battery cannot tolerate.

3/11/24- Nvidia's 1,000-watt chips hot - who will cool them down

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

- https://www.silverliningsinfo.com/data-center/nvidias-1000-watt-chips-will-be-hot-who-can-cool-them?utm_medium=email&utm_source=nl&utm_campaign=FE-NL-Fierce+Electronics&oly_enc_id=5134A1777801E0Y

What Did I Working On Today (Labs, Robot Club, Other Projects):

After Dell's chief operating officer leaked about Nvidia's new proposed chip that can consume 1000 watts, a question arose about how it will be cooled to an appropriate temperature. Discussions about liquid cooling were thrown around, stating that it may become a requirement for this computer chip. Iceotope's cooling system claims that it can cool down chips up to 1,000 watts, which would be perfect for this monster of a chip.

3/12/24- Assessment of Medical Devices Without Animal Experiments

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

- https://www.mddionline.com/testing/assessment-of-medical-devices-without-animal-experiments?ADTRK=InformaMarkets&utm_source=eloqua&utm_medium=email&utm_campaign=15_NL_QMED_North%20America%20Daily_Edit_Sub_20240312&sp_cid=17228&utm_content=15_NL_QMED_North%20America%20Daily_Edit_Sub_20240312&sp_aid=33272&sp_rid=418345&sp_eh=4f53ecc01d837167fa2bc0e8619c4e9b498838c2fa83abf4f4babc4b164dbfcd

What Did I Working On Today (Labs, Robot Club, Other Projects):

For years, animals were prone to being experimented on as test subjects for irritation with medical devices. However, new methods and procedures are being used as alternatives to animal experiment testing. On the new standard, ISO 10993-23, it can be used to test for irritation instead of being tested on rabbits.

3/13/24- The Linux Command

Do 8.2.2.5.2 and include the 4 screenshots of your terminal window of you typing and executing the ls commands.

Planned Task List:

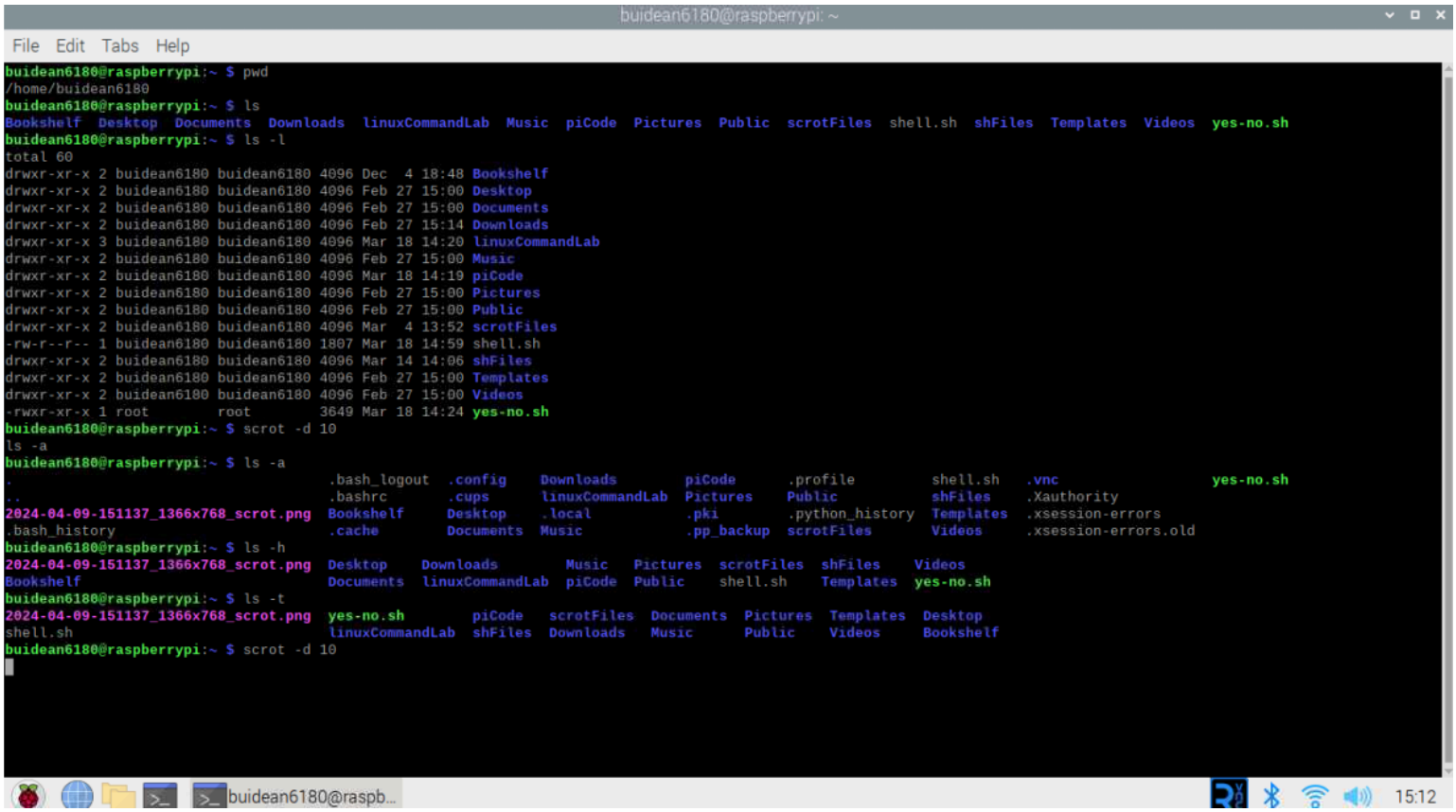
- 8.2.2.5.2

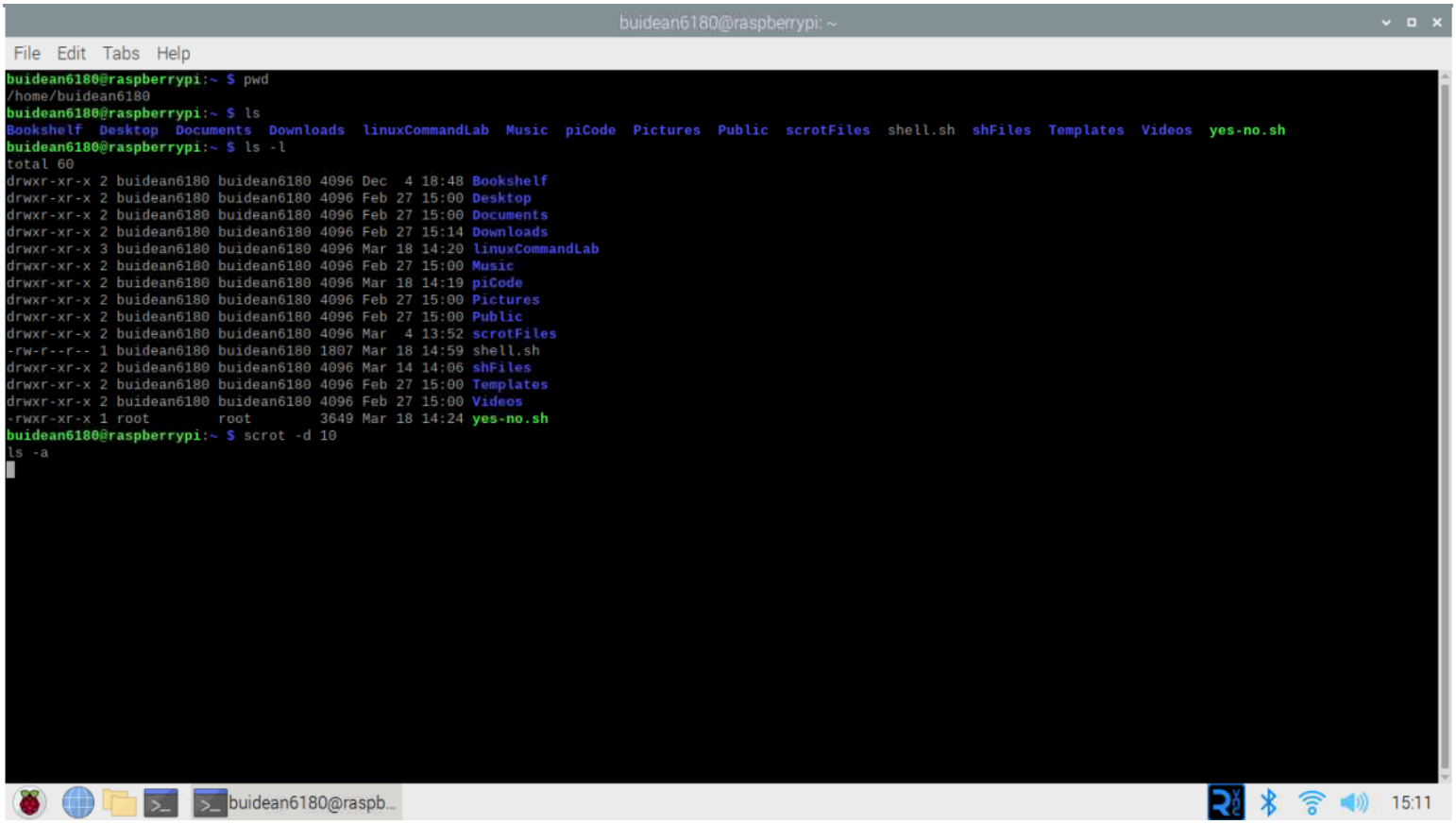
Useful Reference Links:

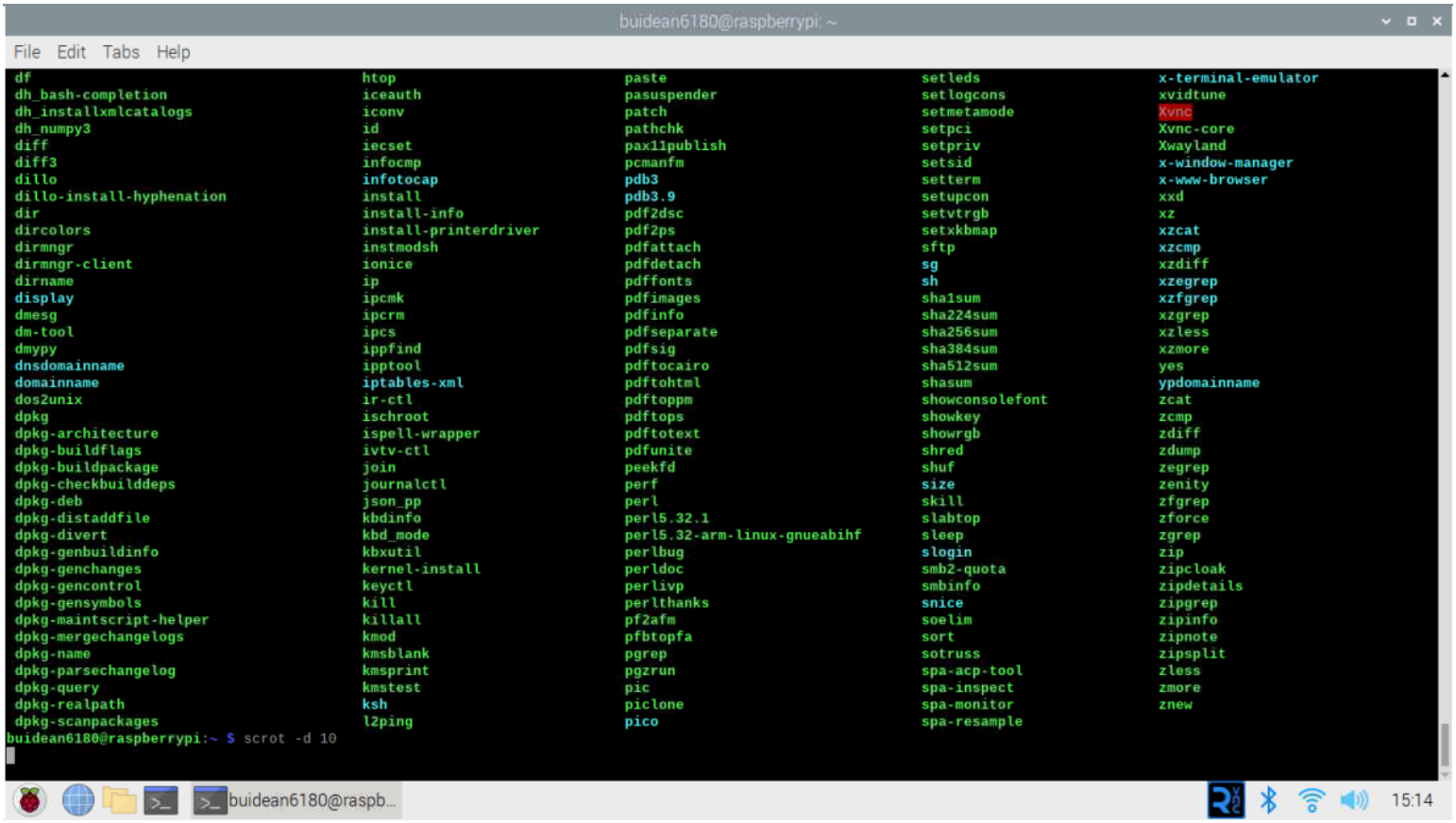
- https://svcte.instructure.com/courses/1243/quizzes/38350/take
- https://drive.google.com/file/d/1q_dSFO-Hn5SGNJt9M7pHxAG1mto-B-xv/view

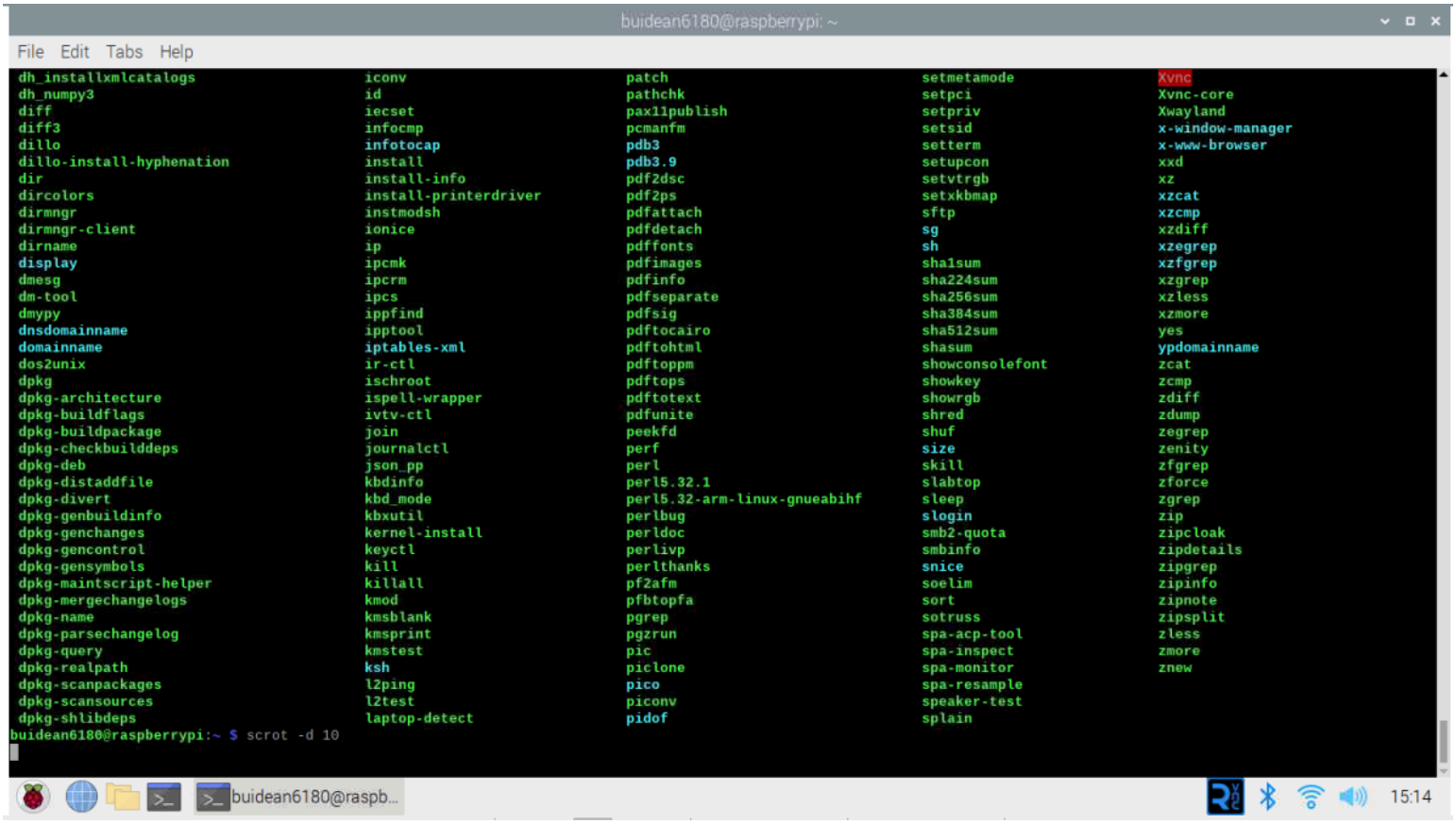
Today's Class Notes: <enter class lecture notes here>

What Did I Working On Today (Labs, Robot Club, Other Projects):


buidean6180@raspberrypi: ~
File Edit Tabs Help
buidean6180@raspberrypi:~ $ pwd
/home/buidean6180
buidean6180@raspberrypi:~ $ ls
Bookshelf Desktop Documents Downloads linuxCommandLab Music piCode Pictures Public scrotFiles shell.sh shFiles Templates Videos yes-no.sh
buidean6180@raspberrypi:~ $ ls -l
total 60
drwxr-xr-x 2 buidean6180 buidean6180 4096 Dec 4 18:48 Bookshelf
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Desktop
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Documents
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:14 Downloads
drwxr-xr-x 3 buidean6180 buidean6180 4096 Mar 18 14:20 linuxCommandLab
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Music
drwxr-xr-x 2 buidean6180 buidean6180 4096 Mar 18 14:19 piCode
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Pictures
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Public
drwxr-xr-x 2 buidean6180 buidean6180 4096 Mar 4 13:52 scrotFiles
-rw-r--r-- 1 buidean6180 buidean6180 1807 Mar 18 14:59 shell.sh
drwxr-xr-x 2 buidean6180 buidean6180 4096 Mar 14 14:06 shFiles
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Templates
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Videos
-rwxr-xr-x 1 root root 3649 Mar 18 14:24 yes-no.sh
buidean6180@raspberrypi:~ $ scrot -d 10
ls -a
buidean6180@raspberrypi:~ $ ls -a
. .bash_logout .config Downloads piCode .profile shell.sh .vnc yes-no.sh
.. .bashrc .cups linuxCommandLab Pictures Public shFiles .Xauthority
2024-04-09-151137_1366x768_scrot.png Bookshelf Desktop .local .pki .python_history Templates .xsession-errors
.bash_history .cache Documents Music .pp_backup scrotFiles Videos .xsession-errors.old
buidean6180@raspberrypi:~ $ ls -h
2024-04-09-151137_1366x768_scrot.png Desktop Downloads Music Pictures scrotFiles shFiles Videos
Bookshelf Documents linuxCommandLab piCode Public shell.sh Templates yes-no.sh
buidean6180@raspberrypi:~ $ ls -t
2024-04-09-151137_1366x768_scrot.png yes-no.sh piCode scrotFiles Documents Pictures Templates Desktop
shell.sh linuxCommandLab shFiles Downloads Music Public Videos Bookshelf
buidean6180@raspberrypi:~ $ scrot -d 10
buidean6180@raspb...
15:12


buidean6180@raspberrypi: ~
File Edit Tabs Help
buidean6180@raspberrypi:~ $ pwd
/home/buidean6180
buidean6180@raspberrypi:~ $ ls
Bookshelf Desktop Documents Downloads linuxCommandLab Music piCode Pictures Public scrotFiles shell.sh shFiles Templates Videos yes-no.sh
buidean6180@raspberrypi:~ $ ls -l
total 60
drwxr-xr-x 2 buidean6180 buidean6180 4096 Dec 4 18:48 Bookshelf
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Desktop
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Documents
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:14 Downloads
drwxr-xr-x 3 buidean6180 buidean6180 4096 Mar 18 14:20 linuxCommandLab
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Music
drwxr-xr-x 2 buidean6180 buidean6180 4096 Mar 18 14:19 piCode
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Pictures
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Public
drwxr-xr-x 2 buidean6180 buidean6180 4096 Mar 4 13:52 scrotFiles
-rw-r--r-- 1 buidean6180 buidean6180 1807 Mar 18 14:59 shell.sh
drwxr-xr-x 2 buidean6180 buidean6180 4096 Mar 14 14:06 shFiles
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Templates
drwxr-xr-x 2 buidean6180 buidean6180 4096 Feb 27 15:00 Videos
-rwxr-xr-x 1 root root 3649 Mar 18 14:24 yes-no.sh
buidean6180@raspberrypi:~ $ scrot -d 10
ls -a
buidean6180@raspb...
15:11


buidean6180@raspberrypi: ~
File Edit Tabs Help
df
dh_bash-completion
dh_installxmlcatalogs
dh_numpy3
diff
diff3
dillo
dillo-install-hyphenation
dir
dircolors
dirmngr
dirmngr-client
dirname
display
dmesg
dm-tool
dmypy
dnsdomainname
domainname
dos2unix
dpkg
dpkg-architecture
dpkg-buildflags
dpkg-buildpackage
dpkg-checkbuilddeps
dpkg-deb
dpkg-distaddfile
dpkg-divert
dpkg-genbuildinfo
dpkg-genchanges
dpkg-gencontrol
dpkg-gensymbols
dpkg-maintscript-helper
dpkg-mergechangelogs
dpkg-name
dpkg-parsechangelog
dpkg-query
dpkg-realpath
dpkg-scanpackages
htop
iceauth
iconv
id
iecset
infocmp
infotocap
install
install-info
install-printerdriver
instmodsh
ionice
ip
ipcmk
ipcrm
ipcs
ippfind
ipptool
iptables-xml
ir-ctl
ischroot
ispell-wrapper
ivtv-ctl
join
journalctl
json_pp
kbdinfo
kbd_mode
kbxutil
kernel-install
keyctl
kill
killall
kmod
kmsblank
kmsprint
kmstest
ksh
l2ping
paste
pasuspender
patch
pathchk
pax11publish
pcmanfm
pdb3
pdb3.9
pdf2dsc
pdf2ps
pdfattach
pdfdetach
pdffonts
pdfimages
pdfinfo
pdfseparate
pdfsig
pdftocairo
pdftohtml
pdftoppm
pdftops
pdftotext
pdfunite
peekfd
perf
perl
perl5.32.1
perl5.32-arm-linux-gnueabihf
perlbug
perldoc
perlivp
perlthanks
pf2afm
pfbtopfa
pgrep
pgzrun
pic
piclone
pico
setleds
setlogcons
setmetamode
setpci
setpriv
setsid
setterm
setupcon
setvtrgb
setxkbmap
sftp
sg
sh
sha1sum
sha224sum
sha256sum
sha384sum
sha512sum
shasum
showconsolefont
showkey
showrgb
shred
shuf
size
skill
slabtop
sleep
slogin
smb2-quota
smbinfo
snice
soelim
sort
sotruss
spa-acp-tool
spa-inspect
spa-monitor
spa-resample
x-terminal-emulator
xvidtune
Xvnc
Xvnc-core
Xwayland
x-window-manager
x-www-browser
xxd
xz
xzcat
xzcmp
xzdiff
xzegrep
xzfgrep
xzgrep
xzless
xzmore
yes
ypdomainname
zcat
zcmp
zdiff
zdump
zegrep
zenity
zfgrep
zforce
zgrep
zip
zipcloak
zipdetails
zipgrep
zipinfo
zipnote
zipsplit
zless
zmore
znew
buidean6180@raspberrypi:~ $ scrot -d 10
buidean6180@raspb...
15:14


buidean6180@raspberrypi: ~
File Edit Tabs Help
dh_installxmlcatalogs
dh_numpy3
diff
diff3
dillo
dillo-install-hyphenation
dir
dircolors
dirmngr
dirmngr-client
dirname
display
dmesg
dm-tool
dmypy
dnsdomainname
domainname
dos2unix
dpkg
dpkg-architecture
dpkg-buildflags
dpkg-buildpackage
dpkg-checkbuilddeps
dpkg-deb
dpkg-distaddfile
dpkg-divert
dpkg-genbuildinfo
dpkg-genchanges
dpkg-gencontrol
dpkg-gensymbols
dpkg-maintscript-helper
dpkg-mergechangelogs
dpkg-name
dpkg-parsechangelog
dpkg-query
dpkg-realpath
dpkg-scanpackages
dpkg-scansources
dpkg-shlibdeps
iconv
id
iecset
infocmp
infotocap
install
install-info
install-printerdriver
instmodsh
ionice
ip
ipcmk
ipcrm
ipcs
ippfind
ipptool
iptables-xml
ir-ctl
ischroot
ispell-wrapper
ivtv-ctl
join
journalctl
json_pp
kbdinfo
kbd_mode
kbxutil
kernel-install
keyctl
kill
killall
kmod
kmsblank
kmsprint
kmstest
ksh
l2ping
l2test
laptop-detect
patch
pathchk
pax11publish
pcmanfm
pdb3
pdb3.9
pdf2dsc
pdf2ps
pdfattach
pdfdetach
pdffonts
pdfimages
pdfinfo
pdfseparate
pdfsig
pdftocairo
pdftohtml
pdftoppm
pdftops
pdftotext
pdfunite
peekfd
perf
perl
perl5.32.1
perl5.32-arm-linux-gnueabihf
perlbug
perldoc
perlivp
perlthanks
pf2afm
pfbtopfa
pgrep
pgzrun
pic
piclone
pico
piconv
pidof
setmetamode
setpci
setpriv
setsid
setterm
setupcon
setvtrgb
setxkbmap
sftp
sg
sh
sha1sum
sha224sum
sha256sum
sha384sum
sha512sum
shasum
showconsolefont
showkey
showrgb
shred
shuf
size
skill
slabtop
sleep
slogin
smb2-quota
smbinfo
snice
soelim
sort
sotruss
spa-acp-tool
spa-inspect
spa-monitor
spa-resample
speaker-test
splain
Xvnc
Xvnc-core
Xwayland
x-window-manager
x-www-browser
xxd
xz
xzcat
xzcmp
xzdiff
xzegrep
xzfgrep
xzgrep
xzless
xzmore
yes
ypdomainname
zcat
zcmp
zdiff
zdump
zegrep
zenity
zfgrep
zforce
zgrep
zip
zipcloak
zipdetails
zipgrep
zipinfo
zipnote
zipsplit
zless
zmore
znew
buidean6180@raspberrypi:~ $ scrot -d 10
buidean6180@raspb...
15:14

3/14/24- Love of Reading #20- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Parzival, the main character's name, talks about the gunters, or Sixers. They are similar to the military due to the job they receive and the way they have to dress to represent. He then goes on about how he has a crush on a certain gunter that has a blog because of her appearance. He then gets a message from his best (and only) friend Aech, who is famous for being an elite gunter.

3/15/24- What Happened to the SpaceX Starship?

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.pbs.org/newshour/science/spacex-loses-contact-with-starship-after-nearly-completing-3rd-test-flight#:~:text=The%20company%20said%20it%20lost,Texas%20near%20the%20Mexican%20border.&text=%E2%80%9CThe%20ship%20has%20been%20lost,%2C%E2%80%9D%20said%20SpaceX's%20Dan%20Huot.

What Did I Working On Today (Labs, Robot Club, Other Projects):
On its third attempt yesterday, Thursday March 15, 2024, it nearly reached its objective but something went wrong. Contact with the spaceship was lost when close to the peak of its flight, and it came splashing down into the Indian Ocean. This attempt was the most successful due to it not exploding and being the furthest it ever went.

3/18/24- Sleep - How could Health Technology Help?

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/Research

Useful Reference Links:

- https://www.cnet.com/health/sleep/

What Did I Working On Today (Labs, Robot Club, Other Projects):
We can incorporate technology into aiding sleep by having an auto-adjusting mattress that keeps a certain temperature and wraps around the subject sleeping to ensure comfortness 24/7, allowing the REM cycle to take place and allowing maximum rest. We can also have curtains that have an internal clock and open or close depending on the time we want them to be adjusted.

3/19/24- Math Problem

Solve the math problem

Planned Task List:
- Solve math problem

Useful Reference Links:
- https://svcte.instructure.com/courses/1243/discussion_topics/27221

What Did I Working On Today (Labs, Robot Club, Other Projects):
1. Calculate tan(10')
2. Set up equation tan(10') = opp/adj
3. Fill in values and solve for opp
4. Optional: Check answer by solving for hyp and use pythagorean theorem to solve

3/20/24- Love of Reading #21- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Aech and Parzival were hanging out with each other, playing video games and watching movies together. At some point they got into a friendly heated conversation when Aech's classmate, I-r0k, entered the crowd watching them argue. Parzival explains how he is a poseur in his monologue, and we get to see his horrible personality.

3/21/24- The Matter Connectivity Standards Brings Hope

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

- https://www.mwrf.com/technologies/communications/article/21284175/nordic-semiconductor-the-matter-connectivity-standard-empowering-the-smart-home?o_eid=9482I8935123F9N&oly_enc_id=9482I8935123F9N&rdx.ident[pull]=omeda|9482I8935123F9N&utm_campaign=CPS240307075&utm_medium=email&utm_source=RF+MWRF+Today

What Did I Working On Today (Labs, Robot Club, Other Projects):

Connectivity Standards Alliance (CSA) aims to make the Matter Connectivity system a part of multiple modern technology innovations and appliances to give consumers the best experience in enhanced security, quality, and efficiency. Although marketing the product has been tough for the company, they have managed to pull through with three hundred companies backing them up.

3/22/24- DoorDash by Drone: Wing Express Partnership to US

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

- https://dronelife.com/2024/03/21/doordash-by-drone-wing-expands-partnership-to-us/

What Did I Working On Today (Labs, Robot Club, Other Projects):

Company “Wing” is looking to partner with DoorDash to test a new experimental project involving delivery drones that brings food to your doorstep. The drones produced by Wing are claimed to be able to travel up to 65 miles per hour and will be aiming to be environmentally friendly in regards to the consumers.

4/8/24- 3D printing fabricate complex integrated circuits

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

https://www.militaryaerospace.com/computers/article/55001961/3d-printing-fabricate-complex-integrated-circuits?o_eid=9482I8935123F9N&oly_enc_id=9482I8935123F9N&rdx.ident[pull]=omeda|9482I8935123F9N&utm_campaign=CPS240327038&utm_medium=email&utm_source=MAE+Newsletter

What Did I Working On Today (Labs, Robot Club, Other Projects):

U.S military researchers are asking tech industries to utilize 3D printing and new materials to create innovative, complex circuits for future aerospace and defense systems. Their goal is to invent new “approaches” to manufacturing 3D microsystems, which hopes to fabricate and print new materials with high quality at efficient speeds.

4/9/24- Space News- Eclipse Recap

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

https://newsletter.smartbrief.com/servlet/encodeServlet?issueid=E2F02A4B-8D0C-4982-A51D-03D3665EE223&sid=9625baa3-2cea-4ad9-93c9-9b6407c5150d

What Did I Working On Today (Labs, Robot Club, Other Projects):

Non-profit organization Astronomers Without Borders (AWB) is working to partner with educational institutions (schools, libraries, museums, etc.) and companies (mainly businesses) across the U.S and Canada to recycle eclipse-viewing glasses. Their goal is to reduce the amount of waste when using the massively produced eclipse glasses made with plastic.

4/10/24- Love of Reading #21- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

Parzival described his present school experience compared to the new OASIS school experience. The software handles any disturbances and distraction of the students to ensure maximum attention span and create a quiet but efficient learning space. Teachers are able to take their class on virtual field trips to give them the hands-on experience visually in order to teach their topic.

4/11/24- NVIDIA Announces Project GR00T Foundation Model for Humanoid Robots and Major Issac Robotics Platform Update

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:
https://newsletter.smartbrief.com/servlet/encodeServlet?issueid=E2F02A4B-8D0C-4982-A51D-03D3665EE223&sid=9625baa3-2cea-4ad9-93c9-9b6407c5150d
What Did I Working On Today (Labs, Robot Club, Other Projects):
NVIDIA releases an announcement of their up-and-coming Project GR00T, which is a general purpose humanoid robot for modeling and design. It is claimed that the project will reach the objectives of having the ability to understand language and imitate human actions through observation. I'm assuming it will use an A.I software to track and collect data to perform these functions.

4/12/24- Demystifying Quantum: It's Here, There, Everywhere

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/research

Useful Reference Links:
- https://www.nist.gov/blogs/taking-measure/demystifying-quantum-its-here-there-and-everywhere

What Did I Working On Today (Labs, Robot Club, Other Projects):
The article talks about quantum mechanics, which they define as the "granular and fuzzy" nature of the universe and the behavior of the smallest particles. Being explored in the early 1900s, scientists made many discoveries that involved quantum mechanics indirectly, such as the discovery of photons. They begin to realize that the scale of particles operates on different conditions and behaviors.

4/15/24- US Navy Taps Hunt Valve for First 3D-Printed Submarine Assemblies

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:
- Read/research

Useful Reference Links:
- https://www.mobilityengineeringtech.com/component/content/article/50529-us-navy-taps-hunt-valve-for-first-3d-printed-submarine-assemblies?utm_source=TB_Defense_News&utm_medium=email&utm_campaign=20240415&oly_enc_id=3803H9425278H4X

What Did I Working On Today (Labs, Robot Club, Other Projects):
The U.S Navy signs a contract with a manufacturing company, Lincoln Electric, to produce 3D- Printed valves for construction in submarines. Although this may not affect my life daily, it does indirectly affect my safety in the country, as the U.S Navy is a military organization and they work to provide defense for the country.

4/16/24- Air-to-Water Technology

Pick a topic and research about it, then write a one hundred words or more summary talking about why it is important and how it can change the world for good

Planned Task List:

- Read/Research

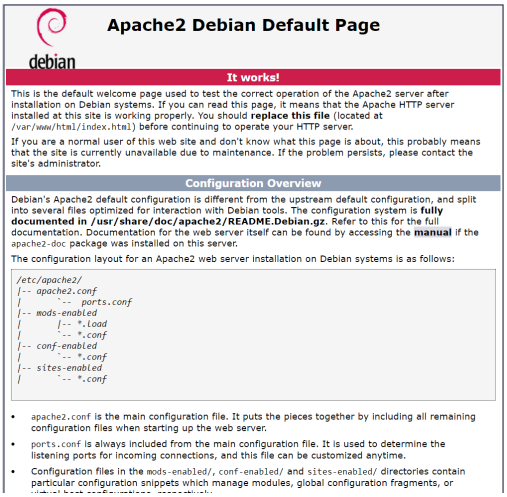
Useful Reference Links:

- https://akvosphere.com/air-to-water-technology/#:~:text=What%20is%20air%2Dto%2Dwater,even%20in%20low%20humidity%20conditions.

What Did I Working On Today (Labs, Robot Club, Other Projects):

Water, although seemingly abundant in the present, is slowly starting to deteriorate in quantity and quality, as multiple conditions can cause changes. Climate change, pollution, and scarcity are some issues that are faced when it comes to accessing clean drinking water. However, water vapor is technically infinite, since 90% of the water on Earth is salt water. Akvo water generators are replicating the natural process of condensation to produce water from air, filtering it to ultimately become clean to drink. This device is a step in the right direction to surviving as a civilization, since humans are susceptible to overusing our resources.

Pictures:



4/17/24- Love of Reading #22- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

Parzival talked about traveling in the OASIS, and how expensive it was to get around. There was technology and magic to get around, but it was not usable everywhere. There was also the most expensive method, teleportation. However, it usually costs a great fee and Parzival barely pays off doing minor tasks in the system. He travels to a world with low level mobs and NPCs to fight and earn gold. If he was not able to pay the fee, he would have to miss school. After gaining too many unexcused absences, he was on the brink of being expelled from school and has taken more precautions to finish out his senior year.

4/18/24- Robot Interface Provide Elusive Touch

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

- https://www.medicaldesignbriefs.com/component/content/article/50548-robotic-interface-provide-elusive-soft-touch?utm_source=TB_Medical_News&utm_medium=email&utm_campaign=20240418&oly_enc_id=3803H9425278H4X

What Did I Working On Today (Labs, Robot Club, Other Projects):

Robotic Researchers have been able to develop a haptic device that replicates the touch of softness of various materials. Softness Rendering interface (SORI) is able to achieve this through decoupling cutaneous and kinesthetic cues, which is feedback from skin of the fingertip and the amount of force applied. Although this type of technology may have a small, niche use in the real world, I think it is best used in simulations that require the sense of touch. It might be able to be used for training to be a surgeon, or perhaps identifying conditions in animals. Combined with the right technology, SORI can be used in the medical field.

4/19/24- UN climate chief says humans have two years left “to save the world”

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

- https://apnews.com/article/climate-change-finance-un-elections-stiell-0b176237b1e4a78d28d5dbcbbf7809f0?ref=thefuturist

What Did I Working On Today (Labs, Robot Club, Other Projects):

With wars happening left and right, pollution becoming a larger and larger issue every day, Earth is declining quickly and a deadline for 2025 is approaching to tackle the carbon pollution problem. Droughts have been a large problem for farming, so there are efforts to reduce emissions in order to strengthen food security and supply. In addition, the gap between wealth in poor and rich countries will enlarge even more, leading to more finance dilemmas. These droughts are caused by high levels of carbon dioxide and methane floating around in the atmosphere, which was the highest all time in history.

4/22/24- SEMI careers

Take the survey and answer the questions to see what job you match with and what you may like

Planned Task List:
- Read/research

Useful Reference Links:
- https://careers.semi.org/job-match?page=1&filter=interest-match

What Did I Working On Today (Labs, Robot Club, Other Projects):
I took the survey and some jobs that I found interesting were product development engineer, field service engineer, and maintenance supervisor. What I found in common with these jobs was that it was hands-on experience and I would be actively involved in helping out people, which I like to do. I found that the maintenance supervisor career, however, may not be the best fit for me since communication and social skills are not my strongest suit. But, I can still try to make it up with whatever skills I have available for the job. That way, I can put my best effort forward.

4/26/24- Love of Reading #23- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):
Parzival talked about the history and biography of James Donovan Halliday, the person behind the creation of OASIS. He talked about his childhood, where he was intelligent but lacked communication skills. He spoke of his interests, where Halliday put his attention toward technology and a lot of popular items in the late 1900s such as comic books and movies. Eventually he friended Ogden Morrow in middle school who eventually became his business partner and collaborator in the future. Together they both started their own video game company called “Gregarious Games.” Through their talent and skills, one of Halliday’s games became a topseller.

4/29/24- Baltimore teacher accused of using AI to create fake, racist recording of principal

Read and research one of the four websites listed and write your thoughts about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:

- https://www.theguardian.com/us-news/2024/apr/27/baltimore-teacher-ai-fake-racist-recording-principal?utm_source=www.notabot.tech&utm_medium=newsletter&utm_campaign=the-dream-team

What Did I Working On Today (Labs, Robot Club, Other Projects):
Athletics Director Dazhon Darien at Pikesville High School used A.I to create a fake recording that mimicked the principal's voice, in which the voice was used to complain about students and faculty members. After reviewing evidence, they found the voice recording to be fake and generated by A.I, and arrested Darien. I think this proves that AI is getting more and more complicated, with all these issues as breakthroughs are being made. Even though there may be positives that AI is becoming more and more useful, it also poses negative consequences. As shown, one of those problems will be Identity Theft.

4/30/24- Army approaches industry for reversible camouflage fabric to enable infantry to hide from infared sensors

Read and research one of the four websites listed and write your thoughts about it in your engineering notebook

Planned Task List:
- Read/Research

Useful Reference Links:
- https://www.militaryaerospace.com/sensors/article/55020216/camouflage-infrared-sensors-reversible?o_eid=9482I8935123F9N&oly_enc_id=9482I8935123F9N&rdx.ident[pull]=omeda|9482I8935123F9N&utm_campaign=CPS240418003&utm_medium=email&utm_source=MAE+Technology+Close-up
-

What Did I Working On Today (Labs, Robot Club, Other Projects):
U.S army experts are contacting companies to develop some type of camouflage fabric for military usage. Their objective is to develop a type of clothing soldiers can wear on ground to conceal themselves from infrared sensors. In the future, they hope to use the fabric to create multiple articles of clothing such as jackets, ponchos, and trousers. I think a use for this fabric outside of the military and used for the general public is some type of entertainment. We can use the fabric to host some type of stealth game, where people can use their dexterity to sneak around and complete objectives. It can be a popular game when done right.

5/1/24- Love of Reading #24- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:
- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:
- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

Parzival kept talking about the history and biography of James Donovan Halliday, the person behind the creation of OASIS. He told us about the story of how OASIS became so big. He mentioned that Halliday and his friend kept working on their company, making massive profit from their released games and advertisements. Halliday and Morrow were polar opposites, but they made a great team. They continued to release games and each time, they pooled in too much profit. But eventually things started to slow down and rumors of the company were that they were going bankrupt. But at last, they came out with a bang and rebranded themselves to “Gregarious Simulation Systems,” and released the OASIS.

5/7/24- Apple and Meta still think Virtual Reality is the future

Read and research one of the four websites listed and write your thoughts (50 words) about it in your engineering notebook

Planned Task List:

- Read/research

Useful Reference Links:

- https://qz.com/apple-vision-pro-meta-oculus-virtual-reality-future-1851454848?utm_item_id=6e278d4f631d3602573282514f13c7e7&utm_url_type=article&utm_user_id=GENERAL

What Did I Working On Today (Labs, Robot Club, Other Projects):

CEO\s Mark Zuckerberg and Tim Cook are still excited about virtual reality becoming more and more realistic, even when their consumers are not at all hyped. Apple’s vision pro has not been doing well in terms of public opinion. Not everyone has been interested in the virtual reality that the CEOs have been envisioning. Even Zuckerberg is losing billions of dollars as of right now. However, entrepreneurs are buying Apple Vision Pro units and exploring what they can do with them. This goes to show how much more successful it is in the enterprise market rather than the consumer market. I think that they are selling the product to the consumers too fast and should hold off on it until they have a final product.

5/8/24- Love of Reading #25- Introduction - 📖📝 Reading/Writing / 🦑 Alternate Assignment

The goal for this assignment is to choose a book that seems interesting to us and read for 15-20 minutes as a form of enjoyment.

Planned Task List:

- Read for 15-20 minutes
- Enjoy the time to read

Useful Reference Links:

- https://svcte.instructure.com/courses/1243

What Did I Working On Today (Labs, Robot Club, Other Projects):

Parizval went on another yap session about his classes. This one was about his Latin class and how he becomes very bored since he already knows his curriculum. To find a way to pass the time, he discovered a bug that allowed him to read books on the client side. Thus, he is able to pull up the *Almanac* and read it when he feels bored. There are many references in the passage that referred to Halliday’s favorite things. He then acted like a fanboy and indulged in everything that Halliday used for entertainment, obsessing to the point he knew every single thing about it.

5/20/24 - RC Circuit Data

Write a short paragraph of today's Project Goals…25 words

Planned Task List:

- List each
- Task you are trying
- To accomplish today

Useful Reference Links:

- List any links related to today's work
-

Today's Class Notes: <enter class lecture notes here>

What Did I Working On Today (Labs, Robot Club, Other Projects):

<copy text between these lines>

<Date> <Title - Daily/Weekly “Blog” Project Title - compelling, descriptive title>

Write a short paragraph of today's Project Goals…25 words

Planned Task List:

- List each
- Task you are trying
- To accomplish today

Useful Reference Links:

- List any links related to today's work
-

Today's Class Notes: <enter class lecture notes here>

What Did I Working On Today (Labs, Robot Club, Other Projects):
Describe the steps/challenges you are working on. Make sure you describe how you set up the experiment, how you executed it, and all the materials you needed to do it. Spend time writing your "reflections". Sometimes more important than the actual results, are your thoughts on "why" and "how". Here is where you accurately describe both the success and failures.

If you make mistakes in the data collected, document the mistake and highlight it with a comment, so you don’t lose the work. Don’t just delete it. Where did you get stuck? A detailed description of issues you got stuck on or did not understand.

Include pictures, Code or links to Code, and links to reference material.

What Will I Work On Next Time?

- (fill this out at the end of class/open lab activity time)
- List your next 2-5 steps or activities.
- This is key!!!
- You need to be thinking about this project as a whole, and break it down into
- small tasks you can complete in 30-60 min

<copy text between these lines>