Engineering Notebook

Mechatronics Engineering 2023-2024

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<Add a Picture or Meme that represents you>

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 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>

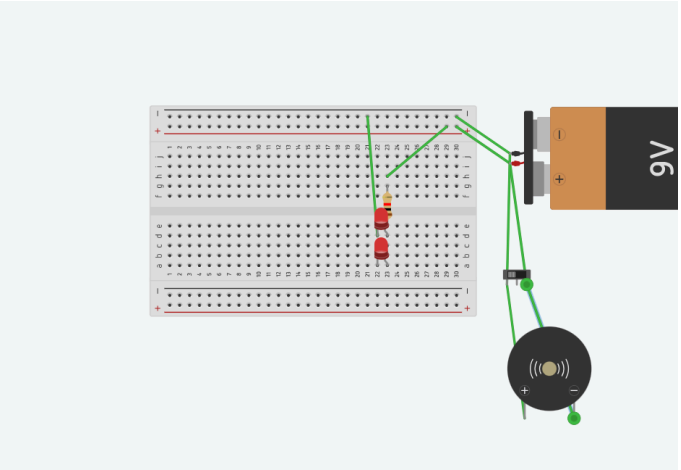
</8/16/23> <The zen of zombie

What did you read? Why is it interesting?

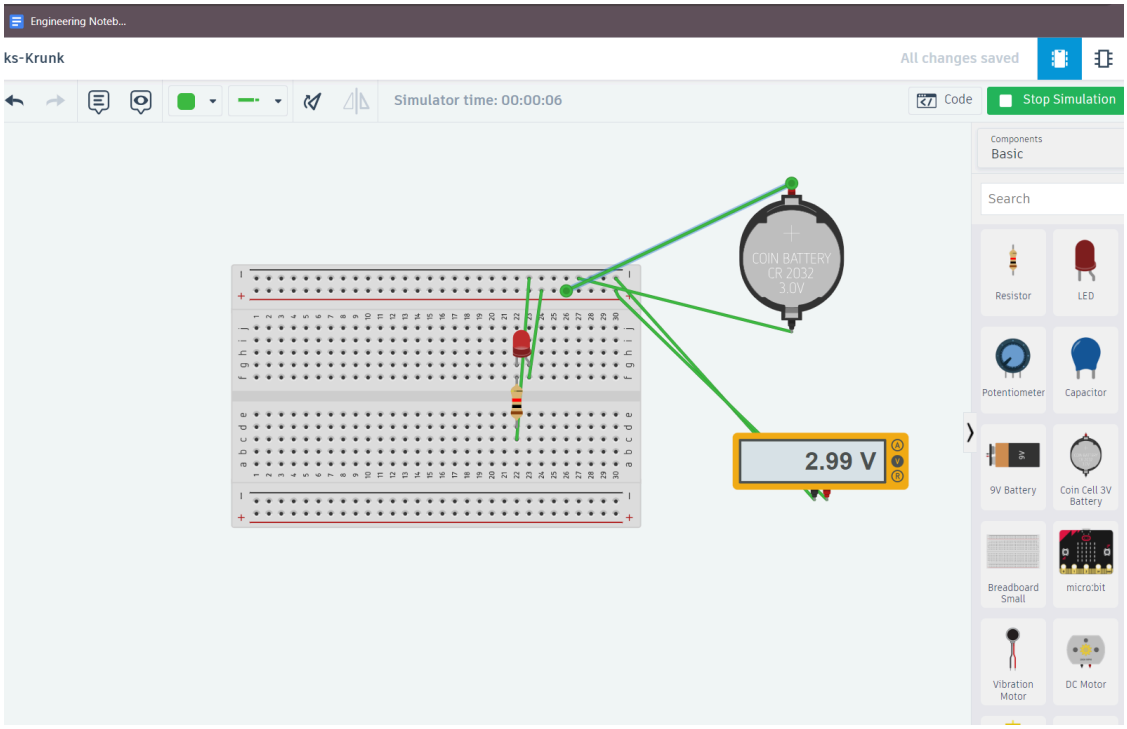
- **Open** Your Class "Engineering Notebook"
- **Create** an entry for today
- **Write** 1-3 sentences - about 10-30 words)

(This will be worth 10-30 points extra credit, if you enter it today, when the assignment is due)

The zen of zombies Learn how to slow down and move at your own pace, become your own boss, and just devour those irritating people who get in your way.



Resistor #	Resistor Value (from color code)	Measured Ω	Measured Volts	Measured I	Calculated I
Resistor #1	4700 ohm	4740 ohm	5.16v	5.20ma	
Resistor #2	335 ohm	325 ohm	5.00v	15.53ma	
Resistor #3	9500 ohm	9800 ohm	5.17v	15.10	



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Each card features ghoulish graphics and morbidly humorous tips on better living through the undead. It turns out that zombies can teach us a lot about enjoying life.

<copy text between these lines>

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Circuit	Measured R1	Measured R2	Measured RT	Calc R1+R2	Measured Vt	Measured V1	Measured V2	Calc Current	Measured Current
1	304	356.5	658	555	5.17	2.34	4.43	7.1	**7.56**
2									
3									
4									

Circuit	R1	R2	Calc R_1+R_2	Calculated V_T	Calculated I_T	Calculated V_1	Calculated V_2
1	330Ω	680Ω	1,010Ω	5v	4.95mA	1.67v	**3.366v**
2	1kΩ	2kΩ	3kΩ	5v	1.66ma	1.6	
3	680Ω	1kΩ					
4							

Circuit	R1	R2	Calc R_1+R_2	Calculated V_T	Calculated I_T	Calculated V_1
1	330Ω	680Ω	1,010Ω	5v	1.63mA	3.36
2	1kΩ	2kΩ	3kΩ	5v	1.66mA	3.2
3	680Ω	1kΩ	1680Ω	5v	2.0mA	2.97
4	330Ω	330Ω	660Ω	5v	2.5mA=	2.5

9/11/23
Learning tools

https://drive.google.com/file/d/1In-oC2I8B0GCG5CCHYarg1bOaz5d28AI/view?usp=drive_link

Circuit	Measured V1	Measured V2	Measured Vt	Calculated R1	Calculated R2
1					
2					
3					
4					

1. What is the primary function of a drill press? a) Sanding b) Cutting c) Drilling d) Welding

2. Which part of a drill press holds the workpiece securely in place? a) Chuck b) Table c) Quill d) Spindle

3. What safety equipment should you always wear when operating a drill press? a) Safety goggles b) Earplugs c) Gloves d) All of the above

4. Which type of drill bit is typically used for drilling larger holes in metal on a drill press? a) Twist drill bit b) Forstner bit c) Spade bit d) Hole saw bit

5. What should you do if the drill bit becomes jammed while drilling on a drill press? a) Force it through the material b) Stop the machine and remove the bit c) Increase the drill press speed d) None of the above

6. Which of the following is NOT an adjustment you can make on a drill press? a) Speed b) Depth c) Width d) Table height

7. When drilling a hole on a drill press, where should you position the workpiece in relation to the drill bit? a) Above the drill bit b) Below the drill bit c) To the left of the drill bit d) To the right of the drill bit

8. What is the purpose of the depth stop on a drill press? a) To adjust the speed of the drill press b) To control the depth of the hole being drilled c) To secure the workpiece in place d) To turn the drill press on and off

9. Which type of material should be used as a backing board when drilling through thin or delicate materials on a drill press? a) Steel b) Plywood c) Concrete d) Rubber

10. In which direction should you feed the workpiece into the rotating drill bit when using a drill press? a) Against the rotation (clockwise) b) With the rotation (counterclockwise) c) Sideways d) It doesn't matter

9/21/23

1.0.5.1.3 - Mechatronics Engineering - Classroom Tools - Design a "Hands On Lab" - Research Assignment - 🛠️ LAB Activity / 🧠 Research - ⚓ Establishing

Wire Cutters Quiz

What is the primary purpose of wire cutters?
a) Measuring wires
b) Stripping wires
c) Cutting wires
d) Twisting wires

Wire cutters are commonly used in which of the following fields?
a) Carpentry
b) Plumbing
c) Electrical work
d) Painting

Which of the following types of wire cutters is specifically designed for cutting thick or heavy-duty wires and cables?
a) Diagonal cutters
b) Needle-nose pliers
c) End-cutting nippers
d) Side-cutting pliers

Wednesday Jan 17, 2024 designcon

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