Ryan M
Journal 02(12/4, 12/6, 12/7, 12/8)
12/12/17

Journal 02

Date: 12/4/17- Class 10:00-11:25 AM

Team Members: Ryan

What I did:

- Did the mastery quiz and received a 78 on it
- Watched Mr. Cribbs go through the laser cutter demo
- Cut out a little sign that says Parish Rover on the laser cutter
    - “Parish” was a raster cut
    - “Rover” was a vector cut, but not all the way through

What I learned:

I had a refresher on how to use the laser when cutting something out. I also learned how to use colors to distinguish different styles of cuts for either raster or vector. You can also use it to set different speeds to different cuts. One thing that I learned today which I didn’t know before was the fact that I could use a vector cut to not even go all the way through the material. Having this knowledge about the laser cutter and the fact that the tool quiz is completed for it is really beneficial because the wheel team will use the laser cutter a lot when cutting out wheels. Because this demo lasted the entire class period, our team never got to design the wheel, but we are really close to coming up with a final design for our wheel. All we have to do is make individual designs for the interior wheels, and that can be done by adjusting the outer part of the layer.

Date: 12/6/17- Class 10:00-11:25 AM

Team Members: Kavita, Ryan

What I did:

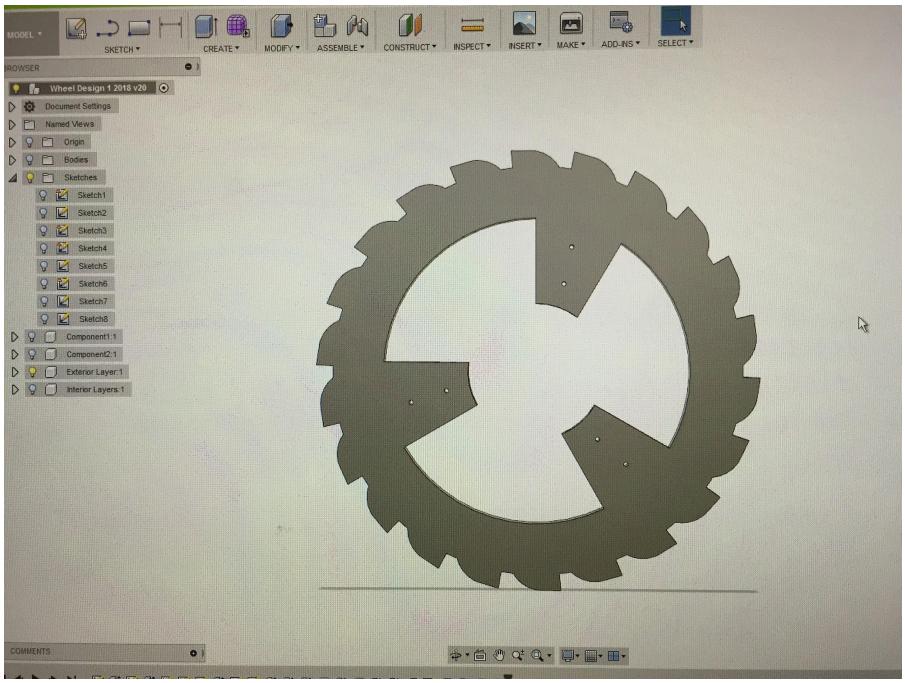
- Finalized the wheel design
    - Interior
        - Expanded the diameter for the whole wheel by .2 inches
        - Made each spoke/design 4 at length
        - Adjusted the radius for the fillet of the rectangle so that the transition from the rectangle to the circle is smooth
        - Made three different layers so that the interior spokes aren't lined up the same
    - Exterior
        - Length of rectangle is 3 inches
        - Diameter is 26 inches
- Kavita created drawings for the layers

What I learned:

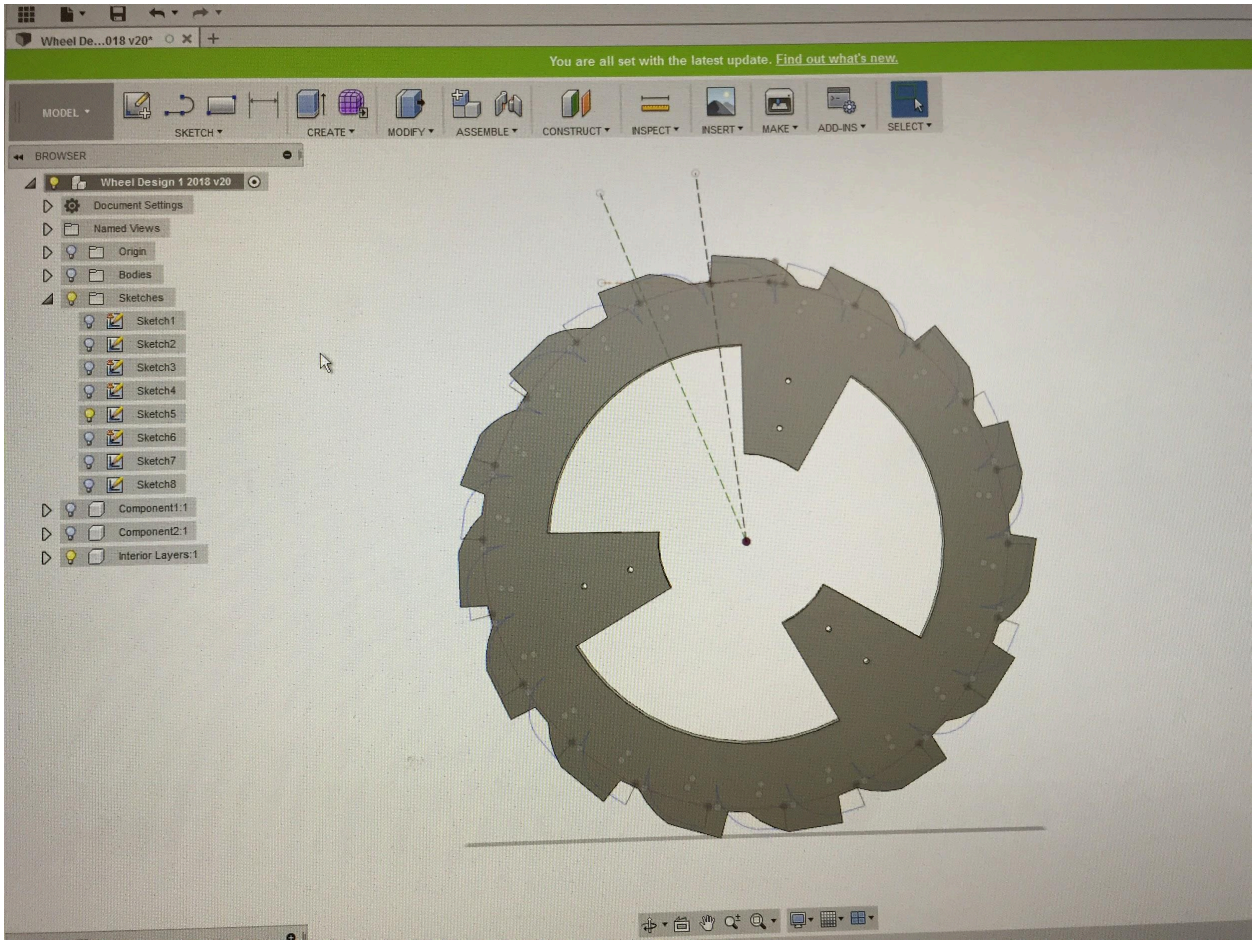
I learned how to rotate the circular pattern around without creating a whole new sketch. In the interior image below, there are two lines that form an angle. Mr. Cribbs taught me that I just needed to adjust the angle in order to rotate the circular pattern. This helps because if I need to go in and make edits to the wheel design from now on if a layer accidentally lines up with

another interior design, I can just go in and slightly change the angle. This will save time in the bigger picture.

Exterior



Interior(1 of the layers)



Date: 12/7/17- Lunch/Flex 11:35-11:45

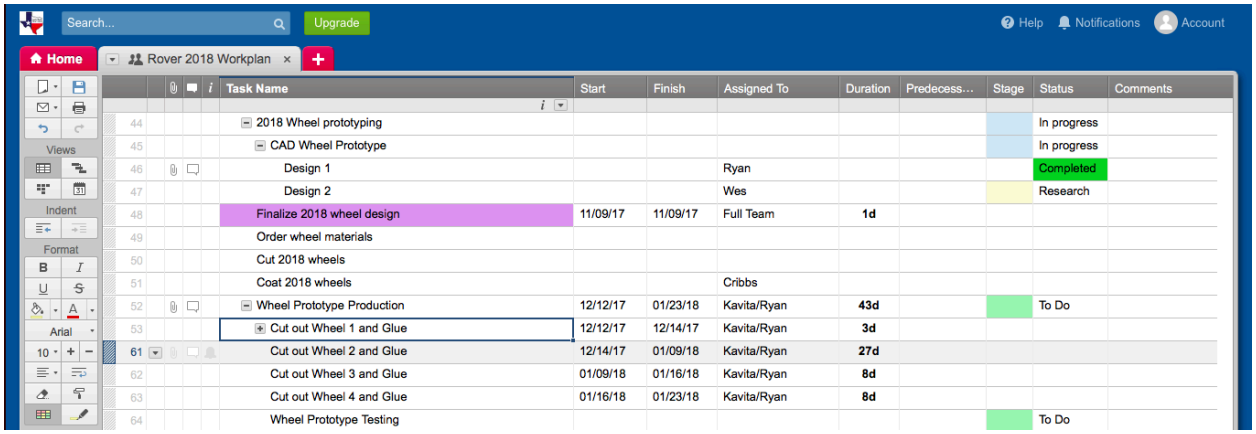
Team Members: Kavita, Katie, Ryan

What I did:

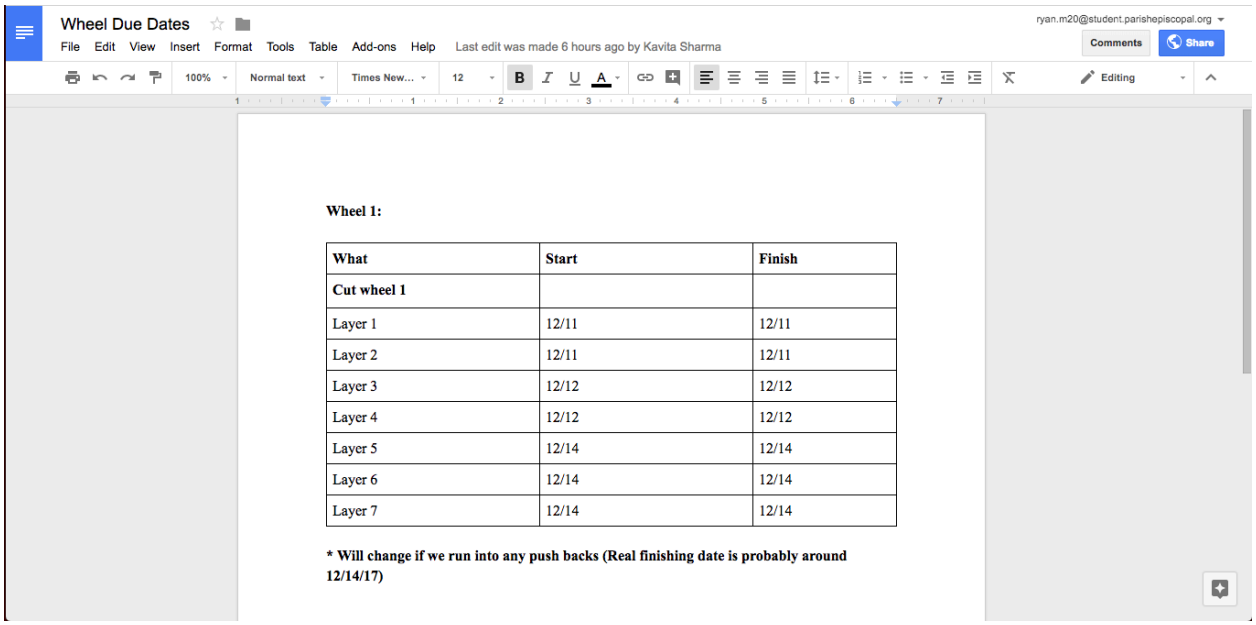
- Worked with Kavita and Katie to create a schedule to cut the wheels with exact dates and times
    - Found a time to cut out each layer and set a goal date to have it done by

What I learned:

I learned that we need to be organized with how we designate assignments, and we need to make sure it works. This will help us in the future because we have a set due date, and if we don't make it by that date, it will encourage us to get it done quick. It is also good to specify everything that we do in this program so nothing is lost in translation.



	Task Name	Start	Finish	Assigned To	Duration	Predecess...	Stage	Status	Comments
44	2018 Wheel prototyping							In progress	
45	CAD Wheel Prototype							In progress	
46	Design 1			Ryan				Completed	
47	Design 2			Wes				Research	
48	Finalize 2018 wheel design	11/09/17	11/09/17	Full Team	1d				
49	Order wheel materials								
50	Cut 2018 wheels								
51	Coat 2018 wheels			Cribbs					
52	Wheel Prototype Production	12/12/17	01/23/18	Kavita/Ryan	43d			To Do	
53	Cut out Wheel 1 and Glue	12/12/17	12/14/17	Kavita/Ryan	3d				
61	Cut out Wheel 2 and Glue	12/14/17	01/09/18	Kavita/Ryan	27d				
62	Cut out Wheel 3 and Glue	01/09/18	01/16/18	Kavita/Ryan	8d				
63	Cut out Wheel 4 and Glue	01/16/18	01/23/18	Kavita/Ryan	8d				
64	Wheel Prototype Testing							To Do	



Wheel 1:

What	Start	Finish
Cut wheel 1		
Layer 1	12/11	12/11
Layer 2	12/11	12/11
Layer 3	12/12	12/12
Layer 4	12/12	12/12
Layer 5	12/14	12/14
Layer 6	12/14	12/14
Layer 7	12/14	12/14

*** Will change if we run into any push backs (Real finishing date is probably around 12/14/17)**

After School 5:00-6:00

Team Members: Sohum, Ryan, Wes, Mark

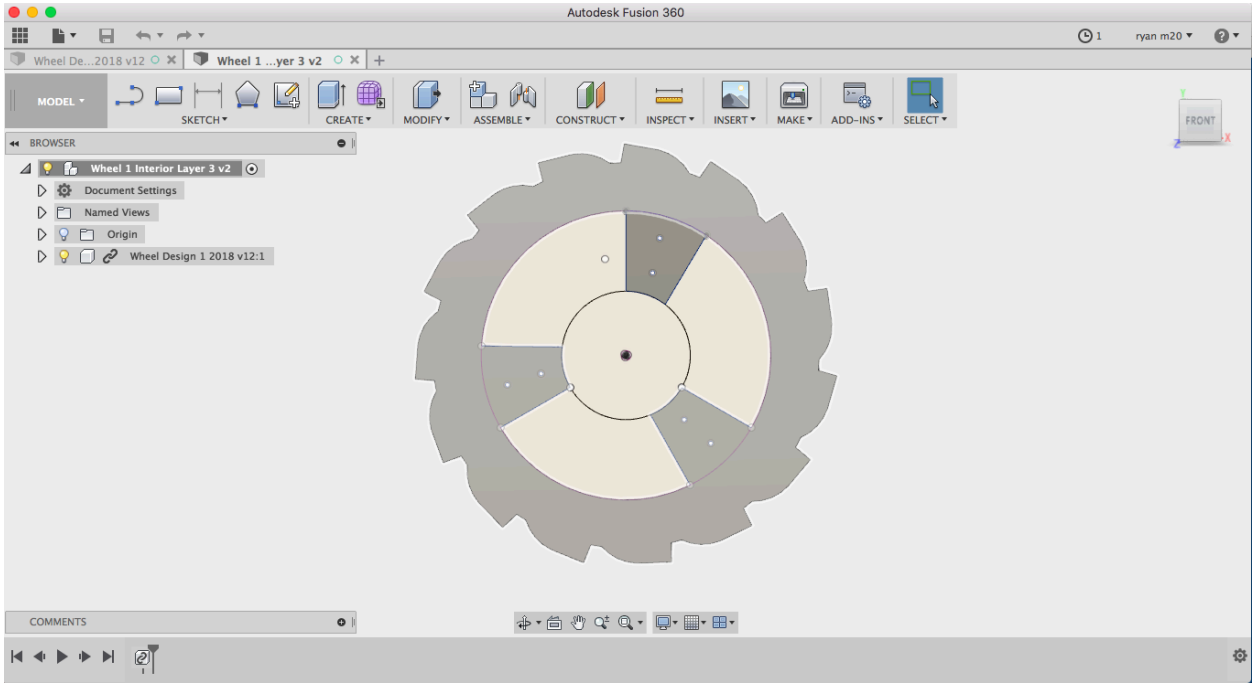
What I did:

- Edited the wheel design
    - Found that one of the bodies that was supposed to be attached to the outer wheel was actually separate in the drawing, therefore the laser cutter would also cut that line
    - Made the wheel all into one sketch so it would all come out as one body
    - Completely redid the outer spokes sketch
- Made new drawings and pdfs that reflected our design

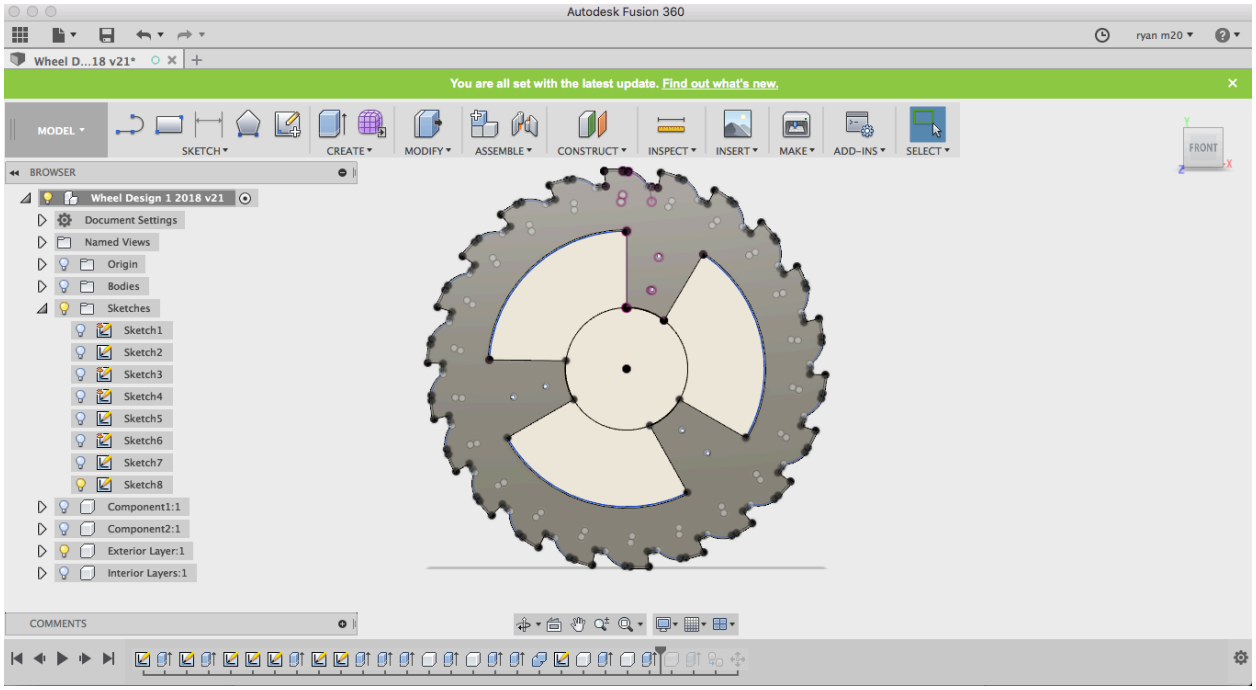
What I learned:

Sohum helped me, and I learned that I always need to create one singular drawing for the whole wheel, otherwise the laser cutter would just cut out something that wasn't meant to be cut out. This is helpful because, if I had not noticed this earlier, we could have wasted a layer of cardboard because the layer wouldn't have been able to function. For future reference, I should always look and check my drawings before I print them to make sure they are the way I want them.

The darker portion is separated



New Design



Date 12/8/17- Class 10:00-11:25

Team Members: Ryan

What I did:

- Watched Ms. Makins do the Welding Demo
- Watched Ms. Makins do the Angle Grinder Demo
- Watched Ms. Makins do the Plasma Cutter Demo

What I learned

I learned that the angle grinder can actually cut metal, whereas, last year, I only grinded down welds on the Rover. This is helpful because you can trim pieces of metal on a project, or the angle grinder is used a lot to smooth out the frame once the Rover is built. Watching Ms. Makins do the Welding Demo was helpful because, in the future, the frame is built by welding, and this skill is useful in engineering, especially if I need to help build the frame. Finally, the plasma cutter demo was helpful because, first of all, I didn't even know what the plasma cutter did until this year. To actually see it work in person was impressive, and it is useful to know how to use in the event that we do need to use it this year.

Plasma Cutter

Welding