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Section: 112-002

Sprint #3 has been released on Canvas, and today you will begin thinking about how you will approach the problem in class. Find the assignment in the Modules page on Canvas, read the prompt, tasks, *Technical Report*, *Example Design*, and the rubric. Use the information from what you have read to answer the following questions.

1. Who will you work with on your project?
2. Amanda Weitzenhofer
3. Maddy Sale
4. What is your role in this project? What tools and skills will you have to use to complete the work?

My role in this project is reviewing and verifying the data given and then presenting on it.

My tools will be: My laptop, MATLAB, Solidworks, Visual Studio Code, Desmos, and Excel

My skills used will be: Programming, 3D modeling, critical analysis, and presentation creation.

1. Create a work breakdown structure for the sprint. List each of the deliverables and the tasks that you will need to complete to finish the deliverable. Use the template below to start.
2. SlideDoc
   1. Tasks: 1,2,4-9
3. Presentation
   1. Tasks: 1-9
4. Solidworks Model
   1. Tasks: 1-5
5. MATLAB file for fin design parameters
   1. Tasks: 1-4
6. MATLAB file for validating fin design
   1. Tasks: 1-6
7. How will you prioritize the deliverables? What should you start working on first, second, …, last and why?

I will start with the SlideDoc, as it needs to be worked on in parallel with the other deliverables after the completion of task three. Once task three is completed, I will begin work on the MATLAB file for fin design parameters. After that is completed, I will work on the Solidworks model deliverable, with work continuing on the SlideDoc in parallel with the MATLAB and Solidworks deliverables. Then I will work on the final MATLAB file deliverable, validating fin design, and final additions to the SlideDoc. Finally, I will begin work on the presentation. It is likely that work or changes to the SlideDoc or previous deliverables will continue during this final stage, as I work to get better diagrams or figure out better explanations for the presentation. The work will be done in this order as it is the order tasks must be completed in. It is likely that there will be multiple movements backwards and forwards as the project goes on, but I cannot predict them now.

1. Complete a SWOT analysis about yourself and how you will engage with the sprint. Think about the internal factors and the external factors that could affect how you complete your sprint. Include at least three items for each of the four categories.

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| **Strengths**   1. Good at coming up with unique approaches to programming problems. 2. Very critical of results 3. Supportive of teammates | **Weaknesses**   1. Too willing to pivot 2. Likely to procrastinate 3. Could develop tunnel vision |
| **Opportunities**   1. Could become closer with classmates 2. Could learn new skills related to MATLAB 3. May discover better/faster ways to 3D model | **Threats**   1. Work from other classes interfering with meetings 2. Instabilities with tools causing data loss 3. Hidden errors in equations leading to errors in results |

1. For the presentation, you will need to create a hook to draw in your audience. Research techniques you can use to grab the audience’s attention and describe one method here that you think will be useful in your presentation.

Hook technique: Provide a reference to a historical event.

I think that this technique for hooking the audience’s attention will be useful for my presentation, as rocket launches are a very well known, exciting phenomenon, and a statement relating my work to that, could successfully draw in the audience’s attention.

1. Like the projects you will face at JMU and in your careers, this sprint is complex and messy. As such, you will certainly have questions about this sprint. List at least two questions you have and where you could find the answer to those questions.
2. Question 1: How can I weed out errors in information provided?
   1. Where you can find answers: Google, Physics department at JMU, Physics textbook
3. Question 2: How can I verify my answers?
   1. Where you can find answers: Google, other tools, Physics department at JMU