**On Orbital Mechanics:**

Premise:

I want to better understand the idea of orbital mechanics and how they apply to flight trajectories and space mission planning. The goal is to make several projects that demonstrate my understanding of orbital mechanics and how they apply to spacecraft. I hope to show that with enough research and through understanding of the physics principles, I can apply what I know to create physics simulations programs, with varying degrees of complexity. Furthermore, I hope that this series of projects will demonstrate my ability to apply what I know about physics to real life space-systems.

*Document guidelines:*

I have chosen a very specific way to lay out this document (this specific way may change as I fill it out, but you can always refer to the change logs of the guidelines to see what is different). Each project will be described initially with a general description, and different aims of the project, at varying levels of difficulty. This level system will serve as a rough guide to how I will go about creating the project and in what order I will complete things, but this is not a set in stone way of completing it. Additionally there will be a short description of how I intend to make the project, (style, language, engine, etc) and why I chose to do it this way.

Each project will also have a log of what I have found to be difficult, what I needed to research, the updates to the project, and anything else that I might see as relevant.

I will also include the physics behind the systems that I am building, to better understand how I will go about implementing the project.