**LunarX Project Plan**

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**Project Overview**

Lunarx is a game based on the online game Moonlander. The game consists of a rocket ship that must land properly on a terrain without destroying itself. The rocket has different limiting aspects such as the fuel. Additionally the rocket obeys the laws of kinematics, meaning the motion is realistic. The player will continually try to make proper landings until the fuel is exhausted.

**Project Team**

Tejasvi Kothapalli - The physics aspects of the project will be handled by Tejasvi. The main physics that seems to be relevant to the project are the rules of kinematics. Aside from the physics, Tejasvi will also handle the aspects related to the rocket in motion. He will be handling the part of the program that analyzes the rocket and the data associated with is such as the horizontal speed and vertical speed.

Andrew Kou - Andrew will handle the graphics aspect of the project due to his extensive background in graphics. The graphics will mainly be comprised of the different ways the rocket will show up on the screen based on the used user input. Additionally andrew will take control of all the things related to the background of the game such as the terrain on which the rocket must land on.

**Challenges**

One of the biggest problems of our project is the density and the level of complexity of the project. There are several factors involved with creating Project LunarX, including animation, graphics, and physics, both of which go beyond the scope of the APCS course. Creating this project involves individual research on the team members’ part. In addition, we will be using Greenfoot, a Java development environment, which provides us with basic framework for our classes. However, our team members do not have experience in using this environment, which will require us to research and spend more time with the environment to become more familiar with it so that we will be able to use it to implement our project. Also the animation will be another obstacle because we must do outside research for this aspect. Finally, the testing will also be a tough part of the project since often the testing is harder than the actual developing. In order to test our game we will have to make sure to test every aspect so that there will be no bugs or faults when our game is played

# Major Tasks and Schedule

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| Task | When | Responsible |
| Receive Greenfoot Package | Friday, 4/29 | All |
| Finish Preliminary Specifications | Friday, 5/6 | All |
| Code Classes | Friday, 5/20 | All |
| Testing | Friday 5/27 | All |
| Research Physics | Thursday, 5/5 | Tejasvi |
| Animation | Thursday 5/21 | Andrew |
| Documentation | Friday, 5/27 | Andrew |
| Create Presentation | Monday, 5/30 | All |