Lunar Lander Mimic Proposal

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Game Dev 1st

1/19/21

Overview

This project will be based on the 1979 game Lunar Lander. In each level of the game, the player guides a small landing ship down to landing at a certain spot safely, without going at so fast a speed that it crashes and gets destroyed. Each level adds a certain amount to the player's score, with later levels making sure the landing point is farther away from the spawning point and awarding higher scores for the extra challenge it will be to complete the level. This game will differ in the key aspect that it will have a lot more color than what the original Lunar Lander had.

Genre

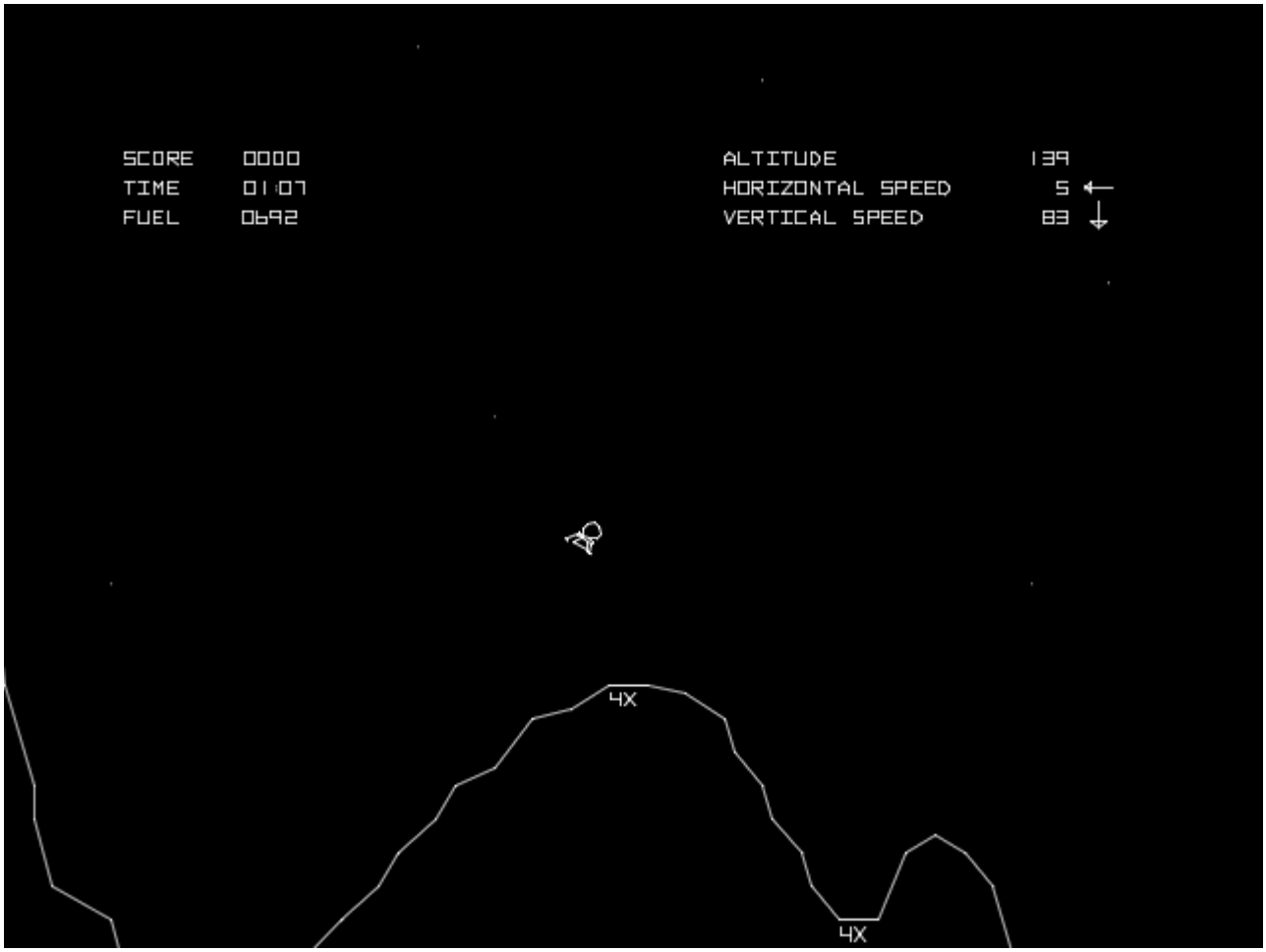
This game will be a 2D single player strategy arcade game.

Theme

The theme of this game will be minimalistic in that it doesn't have very detailed drawings/sprites, but it will instead be more colorful. Any music or noises will be trying to help build towards an excited feeling of exploring space. This theme should build towards an exciting atmosphere that the player can enjoy.

Visual Aesthetics

The visual aesthetics will be minimalistic and colorful compared to the original game. Simple sprites will be used in the game, and the overall graphics will try to be pretty bright and colorful. The game will not completely rely on looks, however, still drawing heavily from gameplay and strategy. The game will use a raster-based graphics engine.



Sound Design

The sounds will try to be generally simple, potentially with some background music and lots of noises to give the player feedback for what they do. For example, in gameplay, there will primarily only be noises when the thrusters of the lander are being used or when landing. A warning noise when within a certain range of an obstacle could be another potential audio feedback. A warning for if the player is going to hit the ground too fast is also another potential audio feedback that could be given.

Goal

The goal of the game is to get the highest score by landing as many Lunar Landers as possible successfully.

Mechanics

The player can rotate the ship using the joystick (or arrow/wasd keys). The player can boost the ship based on the direction it is facing by pressing a button (or space bar). There may be a single or multiple landing points for the player to target. If the player hits the ground at an angle or at too high of a velocity, then the lunar

lander would explode, and the player loses a life. The player has 3 lives before the game ends and their score is recorded. Another system that could be implemented is a high score system that is persistent. Another mechanic for the game is that the lunar lander has a limited amount of fuel to get to the desired location safely.

Players

The game will be a single player arcade game.

Enemies/Hazards

Hazards in this game include not landing at a designated landing site, the player hitting the ground at a high vertical speed, or the player hitting the ground at a high horizontal speed, which would cause the lander to explode. The player can also run out of fuel which would lead to one of the aforementioned scenarios. Another hazard that will be used is random pieces of space rock that float above the terrain, which could collide with the lunar lander as it gets closer towards the ground.

Individual Tasks

Student	Responsibilities
Rayan Afsar	Level generation and design; Obstacle programming and design; Speedometer and distance calculations (includes detecting how hard the lunar lander lands)
Maddox Pealock	Programming of gravity; Programming of thrusters; Programming of score calculations and Persistency
Oliver Kuehl	Sound design; Programming of Fuel; Main menu design

Technical References

https://www.youtube.com/watch?v=dwcT-Dch0bA

https://www.youtube.com/watch?v=McAhSoAEbhM