

Final Project, CSCI 441, Fall 2018

The Protagonists

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Our proposed project is going to be OreKart Pull.

You are a cube pulling an ore-cart. There will be beverages to collect and cubes with blue and red flashing lights to avoid. When you collect beverages the physics of pulling the cart gets more challenging... because the cart is heavier and has more inertia.

The technical challenges we anticipate are reasonable ore-cart pulling physics, which will include a rope attaching you to the ore-cart, which we anticipate being the most challenging. Other challenges include making red and blue lights move with the enemies, which rotate circularly like a police car. We also plan to implement obstacles to avoid.

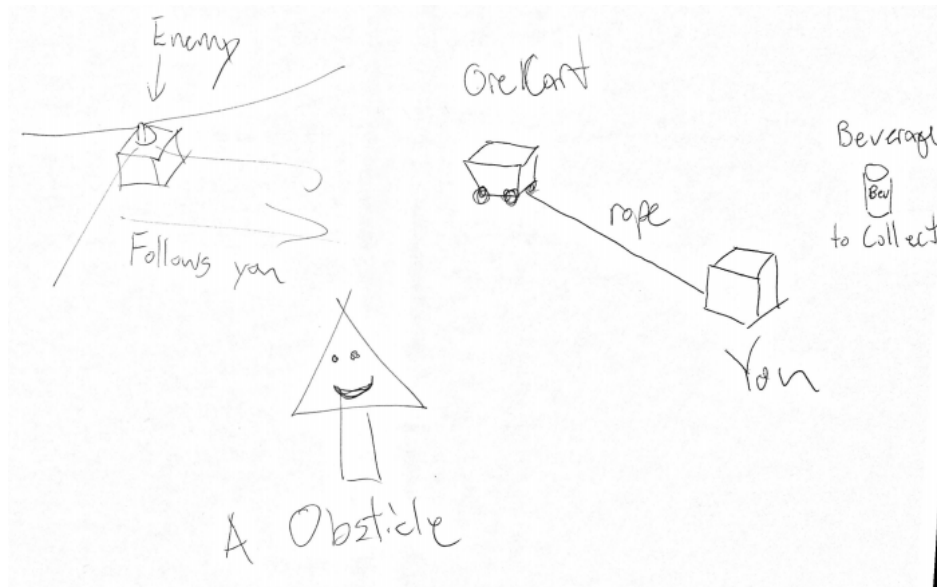


Figure 1: Diagram. In our diagram we include the most important features of our game.

Requirements

1. **Movement:** The character will be able to move according to inputs from the user
2. **Scoring System:** The user will earn points based on their performance
3. **Ore Cart Physics:** The ore cart will be attached to the user with a rope and move according to force applied to the rope.

4. **Enemies:** Enemies will chase the user. If enemies capture the user the game ends. They will have rotating red and blue lights on top of them to alert you to their presence.
5. **Obstacles** There will be obstacles which neither you nor the ore cart can go through.
6. **Shading:** We will use a standard lighting model with special lighting from the enemies.
7. **Beverages:** Beverages will be able to be collected, they will weight your cart down and make it harder to pull.