Release Summary

Product Name: VectorKart
Team Name: Megatherium Within
Release: 1.0
Date: 7/22/2024

Key User Stories & Acceptance Criteria

1. As a student, I want to visualize velocity and acceleration because I'm having a hard time grasping this concept in my physics class.
   a. Acceptance Criteria:
      i. Be able to visualize 3 vector components (current velocity, acceleration and new velocity)
      ii. Visualization of vectors represents vector addition
      iii. Break down instantaneous velocity as speed and angle
2. As a player I want to get live feedback on my gameplay so I can improve and learn from my mistakes.
   a. Acceptance Criteria
      i. Have visual feedback when a player goes off-track
      ii. Have lose penalty for going off-track too often
      iii. Have a win condition when the player completes a lap

Known Problems

- Same color cars and lack of collision can lead to confusion between players if there is overlap between cars
- No collision between cars can lead to overlap
- Collision with edge of map cancels movement (intentional but being reconsidered due to confusion)
- Limited to one map limits scenarios for learning
- Mysterious JSON error in console.log

Product Backlog

1. As a player, I want to see new levels in the game so that there is variety in my gameplay experience. (8 SP)
    a. procedurally generated maps with shareable seeds
    b. configurable levels (number of laps, max off-tracks, etc.)