# Sprint Plan 3

**Product Name**: VectorKart
**Team**: Calvin Owen, Yesenia Puga, Brian Chung, Gobe Fang, Gabriel
Cardozo, Shauna Mahoney
**Sprint Completion**: Monday, 7/22/24

## High-Level Goals:

Produce a minimally functioning singleplayer version of the game that links the graphics with
the game logic.

## User Stories/Tasks:

1.  As a player I want to be able to play a live game against my friends so I can compete
    with them. (3 SP)
    a.  Turn control logic
    b.  Statistics for multiple players
    c.  GameObject instancing
    d.  Lose/win condition logic for multiple players
2.  As a player, I want to see new levels in the game so that there is variety in my gameplay
    experience. (8 SP)
    a.  Render map
    b.  Procedural map generation
        i.  seeded?

Cleanup from Sprint 2
- Car lerp animation: Make the car model lerp smoothly from current position to a new
  position.
- Integrate Vector animation
- Collision detection with the finish line.
- Lose/Win conditions for one player

## Team Roles:

- Scrum Master: Brian
- Product Owner: Gabe
- Developer Team: Everyone else

# Initial Task Assignment:

- Calvin - Turn control logic: multiple cars moving depending on turn, each car has own stats
- Gobe - Procedural Map Generation: create map with random radiuses from a centerpoint
- Gabe - Orthographic View:
- Yesenia - The mouse cursor can detect when it crosses the finish line (in the right direction). When it detects the mouse course it will print out on the console the number of times it crosses(in the right direction) the finish line
- Shauna - Integrate vector into rendering by creating function that take the base position, current velocity, and acceleration and returns transforms for velocity, acceleration, new summed velocity vectors
- Brian - Update Scrum, Statistics for multiple players: Show stats for multiple players including angle, speed, and max speed. Display game over message

# Task Backlog

- Gobe: Create an interface for sharing and generating maps from seeds
- Gabe: Render the map to the screen
- Brian: Make the dashboard look prettier
1. Car lerp animation on each turn
2. Logic for lose/win conditions
3. Game reset logic
4. Enhance collision detection
5. GameObject instancing optimizations in the RenderEngine

# Scrum Times:

- Monday 7/15: 12:30pm
- Tuesday 7/16: 11-11:45am (with TA)
- Thursday 7/18: 11-11:45am (with TA)

# Scrum Board & Burnup Chart

- On GitHub Project
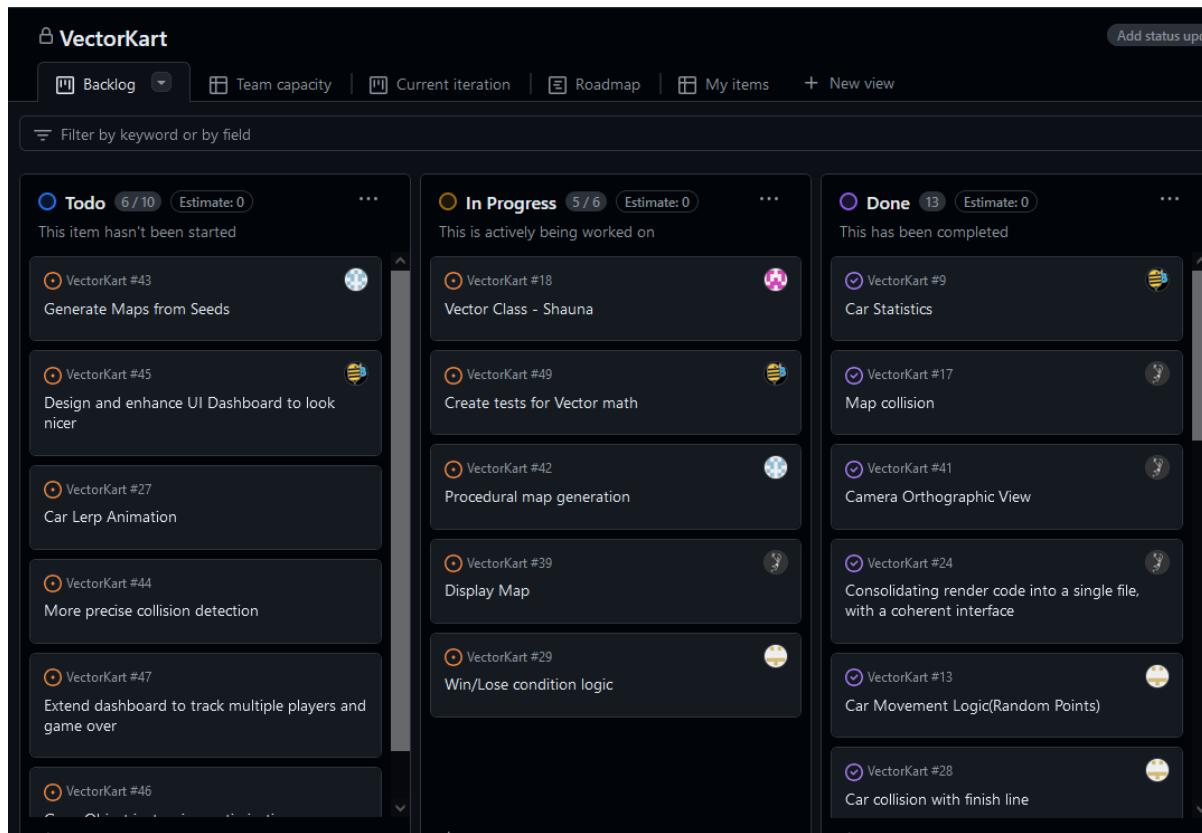


## VectorKart Sprint Burnup Chart

Sprint 2 (7/8-7/14)