Project Quacky Wheels: Feature List

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Intro:

This is a rough feature list of components for our game. This, along with our schedule document will help decide on what features to discard based on time constraints. Our Schedule document will be the first point of reference. So for more information on the features outlined here, see the schedule document.

This is by no means a complete list, and is bound to grow/shrink as we continue development.

Milestone 1:

Feature	Priority	Risk
Multi-Platform choices (Windows, Mac, Linux) Allow the game to be built and run on multiple platforms. Otherwise, windows only. Make smart decisions on API's and build processes.	Low	Med
Game Loop Events, Like Update()	High	Low
Game Engine Design and Skeleton Code	High	Low

Milestone 2:

Feature	Priority	Risk
Basic 3D Rendering (Grey Cube)	High	Med
Textured 3D Rendering	Med	Low
.obj file Mesh 3D Rendering and Importing	High	Low
Skybox Rendering	Low	Low
Trail Rendering (Trail creation using meshes)	High	Med
Trail Rendering with Transitioning Materials	Low	Med
Interchangeable Textures and Materials	Med	Low
PhysX Box Collisions	High	Low
PhysX Mesh Collisions	High	Med

PhysX Other Colliders	Low	Med
PhysX Raycasting	High	Med
Scripting using a different language (Other than C++)	Low	High
Editor UI A editor application to allow us to modify up the game.	Med	Very High
Keyboard IO Integrate keyboard input into the game. Good for testing.	Low	Low
Xbox Controller IO. Allow us to read controller input.	High	Med
Driving Model for Milestone 2	High	Med
Test Track for Milestone 2	Low	Med
Lap System A system for tracking the number of laps each racers has done. Allows for multiple paths.	Low (Milestone 2), High (Milestone 3)	Low
Debug UI Messages Display debug messages overtop of the game. Chances are we will use the console for most of the time.	Low	Med
Debug UI Lines Debug lines for helping with raytracing and various vector things.	Low (Milestone 2), Med (Milestone 3)	Med

Milestone 3:

Feature	Priority	Risk
Level Loading/Unloading API	Med	Med
Waypoint Spline System	Med	Med
Sound API Integration	High	Med
Easily Interchangeable sounds	Med	Low
"Game Flow" logic. Logic for (Countdown, Go, complete laps, display results) game events.	High	Low

Kart Driving (See Schedule)	High	Low
Kart Driving Jumping	Low	Med
Kart Driving Drifting	Low	Med
Kart Driving AI, Driving, Powerup Usage	High	High
Kart Driving AI Drifting, Difficulty Levels	Low	Med
Player Trail Generation	High	Low
Player Trail Collision	High	Low
Powerups. These are explained more in the design document.	High	Med
Jump Powerup	Med	Low
Speed Up	High	Low
Slow Down	High	Low
Egg	Med	Med
Teleport	Low	High
Ignore Trails	High	Low
JetPack	High	Low
Missile	High	Med
Switch	Low	High
Multiplayer Functionality 1-2	Med	High
Multiplayer Functionality 2-4	Low	High
Track Components and Art	High	Med
Boosters	Med	High
Winding Turns, Split paths	High	Low
Icy Roadway	Med	High
Jumps	Med	Med
Falling Obstacles	Med	Med

Tilting Roadway	Med	High
Snake Trap	Med	High

Milestone 4:

Feature	Priority	Risk
UI System	High, Med for a Generic System	Med
Shadows (Maps)	Low	High
Frustum Culling	Low	High
Motion Blur	Low	High
Ambient Lighting	High	Med
State Animation System	Low	High
Tween System	Low	Low
Different Racers (Duck, Penguin)	Low	Med
Player UI	High	Low
Minimap	Low	Med
Position UI (Positions of others in a race)	Med	Should be Low

Again, these are all estimated tasks and priorities. The result will vary as we continue our development.