

Product Backlog aka Priority List

1. User Interface (Must-Have)

- **Game UI**

As a player, I want a responsive UI that displays my character ('Bucky'), buttons for movement, and three lanes to navigate so that I can control my actions effectively.

As a player, I want animations for collisions, start, finish, and lane navigation so that the game feels more engaging and visually appealing.

- Characterized player ('Bucky').
- Buttons for movement.
- Three lanes for navigation.
- Animations for:
 - Collisions
 - Start
 - Finish
 - Lane switching

- **Acceptance Criteria:**

- The player character ('Bucky') is visible and identifiable.
- The game has **buttons for movement** that respond to input.
- The game has **three lanes** for navigation.
- The game includes animations for:
 - Moving between lanes.
 - Colliding with obstacles.
 - Starting the game.
 - Finishing the game.

- **Menu System**

As a player, I want a clear and intuitive menu with a start and quit button so that I can easily begin or exit the game.

- Start button.
- Quit button.
- Display the player's top 5 scores.
- **Acceptance Criteria:**
 - The menu displays a **Start** button that begins the game.
 - The menu displays a **Quit** button that exits the game.
 - The menu shows the **Top 5 player scores** when available.
 - The menu layout is clear and accessible.

2. Core Gameplay Mechanics (Must-Have)

- **Timer System**

As a player, I want a visible timer on the screen so that I can track how much time I have left and estimate my final score.

- Display a countdown timer on the screen.
- Timer decreases as the game progresses.
- Timer pauses when the game is paused.
- Timer negatively iterates by (x) when hitting an obstacle
- **Acceptance Criteria:**
 - The timer is visible on the game screen.
 - The timer starts counting down when the game begins.
 - The timer pauses when the game is paused.
 - The timer stops when the game ends.

- **Obstacles**

As a player, I want moving obstacles that reduce my time upon collision so that the game presents a challenge and feels rewarding to play.

- Moving obstacles that reduce time on collision.
- Different obstacle models for variety.
- Potential difficulty scaling for obstacles.

- **Acceptance Criteria:**

- Obstacles appear on the screen while the game is active.
- Obstacles move in a set or randomized pattern.
- Colliding with an obstacle decreases the timer.
- Different obstacle models exist in the game.
- Obstacles may have varying difficulty levels.

3. Optional Enhancements (Nice-to-Have)

- **Settings Menu**

As a player, I want a settings menu where I can adjust game preferences (e.g., volume, difficulty) so that I can tailor the game to my liking.

- Adjust difficulty, volume, or other game settings.

- **Acceptance Criteria:**

- The settings menu exists and can be accessed from the main menu.
- Players can adjust at least one game setting (e.g., sound, difficulty).

- **Custom Cars**

- Option for players to select different cars.

- **Acceptance Criteria:**

- The game allows players to select different cars before starting.

- **Tutorial**

As a new player, I want a tutorial that teaches me the controls so that I can practice before playing the main game.

- Guide to help new players learn controls and mechanics.

- **Acceptance Criteria:**

- A tutorial mode exists that explains controls and mechanics.
- The tutorial can be skipped or exited at any time.