Sprint Breakdown (4 Weeks)

Sprint 1: Planning & Research (Pre-Development)

- **Technology & Setup**
    - Ensure the game frame works properly in a web environment.
    - Ensure proper setup with Source control
- **Game Architecture & Design**
    - Create a game flow diagram showing screen transitions and game states.
    - Design a basic layout for UI elements.
- **Obstacle & Car Research**
    - Gather reference images for obstacles and cars.
    - Decide on different obstacle types and possible difficulties.

Goal: Basic Webpage with a Frame with other setup activities and research for later assets.

Sprint 2: Basic Gameplay Implementation

- **Player Movement Refinement**
    - **Smooth lane switching**
    - **Handle edge cases (e.g., can't move off-screen)**
- **Fix Collision Response**
    - **Prevent game from stopping on collision**
    - **Implement appropriate response (Negatively Iterate timer)**
- **Game Loop & Timer**
    - **Add real-time countdown timer**
    - **Implement pause/resume functionality**
- **Obstacle System**
    - **Obstacle spawning logic refinement (ensure fair/randomized spawning, spacing, etc.)**
- **UI Foundation**
    - **Create a basic menu (Start, End, Pause)**
    - **Display timer**

Goal: A playable prototype where the player can interact with basic UI elements.

Sprint 3: Interaction & Visuals

- **Obstacle Behavior**
    - Make obstacles move across the screen.
    - Implement collision detection with obstacles.
- **UI Enhancements**
    - Display the timer and score properly.
- **Basic Animations**
    - Add animations for game start, collisions, and movement.

Goal: Core mechanics work with a basic UI and animations.

Sprint 4: Polish & Extras

- **Scoring System Finalization**
  - Implement and store the player's top 5 scores.
- **More Visual Improvements**
  - Add different obstacle types and animations.
- **Bug Fixing & Testing**
  - Perform final debugging and playtesting.

Goal: A playable, polished version with scoring and refined visuals.