**HYDROGEN VIDEO GAME -PROJECT PLAN**

**TEAM NAME: HYDRO DRIVE**

**CODERS**

**MEMBER NAMES & CONTACT INFORMATION**

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**COMMUNICATION METHOD**:

Twice weekly: Mondays & Wednesdays 12:00pm- 1:30pm via Google meet.

**PROJECT MILESTONE OUTLINE**

**Week 1**: Project initiation and planning.

Deliverables:

* Project plan documents
* Name creation for the team
* Time and method of communication.

**Week 2**: Project research.

Deliverables:

* Define project scope.
* Set up project environment (python, game libraries like Pygame)
* Research similar games for inspiration and technical references
* Delegation of tasks to each member of the team with assigned timeline

**Week 3**: Concept design for the game.

Deliverables:

* Design multiple racetracks with varying difficulties like (long, short, hilly, flats)
* Implement track layouts with obstacles and different terrain types.
* Code debugging

**Week 4**: User Interface (UI) & Game Controls

Deliverables:

* Develop the main menu: start, options, exit.
* Create an in-game HUD (heads-up display) showing speed, remaining fuel and position.
* Implement keyboard controls for car handling
* Submission of Demo 1

**Week 5**: Efficiency & Performance Metrics

Deliverables:

* Implement a system to measure fuel efficiency.
* Track player performance in terms of lap ties and fuel usage
* Display post-race statistics showing performance metrics

**Week 6**: AI opponents & Multiplayer

Deliverables:

* AI- controlled opponents that race against the player
* Implements Varying levels of AI difficulty (smart fuel management)

**Week 7**: Game Polishing and Bug Fixes

Deliverables:

* Fine- tune car handling and fuel mechanics for balanced gameplay.
* Refine Visuals, add textures and improve track details
* Perform bug testing and fix gameplay issues.

**Week 8**: Final Testing & Submission of Final Demo

Deliverables:

* Conduct full play through testing of different track and fuel strategies.
* Prepare a final project demo to display the game and its mechanics
* Submit final Demo

**A SKETCH OF WHAT THE GAME WILL LOOK LIKE:**

