



**COMSATS UNIVERSITY ISLAMABAD,  
ABBOTTABAD**

Game development  
Assignment # 02 Car Driving

***Submitted by:***

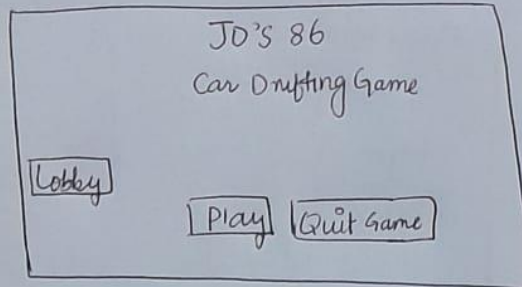
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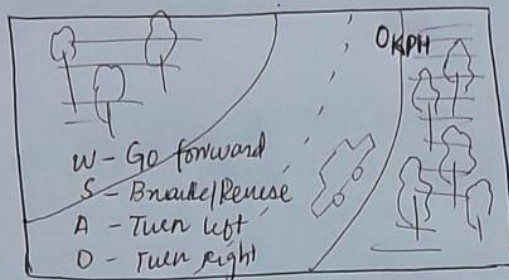
Sir Ibtisam Gul

## Story Boards:



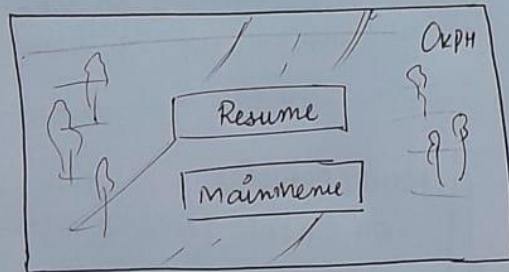
main menu

- A car-themed background
- Buttons for 'start' and 'quit'



Level 1: Free Drive

- Track overview
- Keys and distance covered



Pause Menu

- overlay screen with 'Resume' and 'Main menu' buttons



Level 2: Multiplayer

- Track overview
- multiplayer cars on track.

## Onion architecture:

### **Layer 2**

**•Interfaces:**

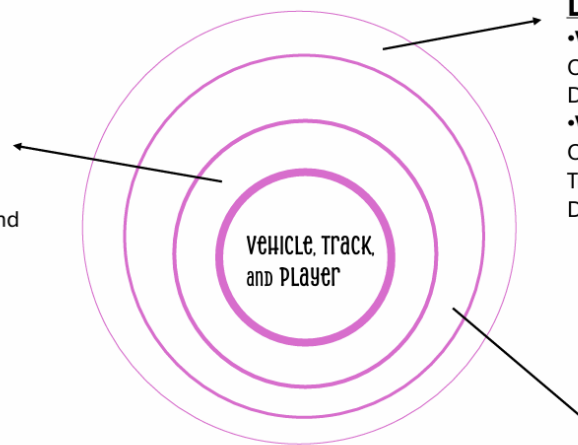
ICarController,  
IRaceTrackManager,  
IDriverProgressManager

**•Commands:**

AccelerateCommand,  
BrakeCommand,  
SteerCommand, DriftCommand

**•Handlers:**

CarCommandHandler,  
TrackCommandHandler,  
DriverCommandHandler



### **Layer 4**

**•Views:**

CarView, TrackView,  
DriverView

**•ViewModels:**

CarViewModel,  
TrackViewModel,  
DriverViewModel

### **Layer 3**

**•Repositories:** CarRepository,  
TrackRepository, DriverRepository

**•Dependencies:** UnityPhysics,  
UnityGraphics, AudioSystem

## Two Game functionalities:

For our assignment, we have the following functionalities:

### **1. Level 1: Free Drive Gameplay**

- Level 1 serves as the introductory level where players can freely drive the car and practice controls.
- **Details:**
  - Includes basic mechanics like moving forward, braking, and turning using keys (W, S, A, D).
  - Displays distance covered and speed in kilometers per hour (KPH).
  - Focuses on the core driving experience, which is central to the game.

### **2. Pause Menu Functionality**

- The Pause Menu allows players to pause the game during gameplay. It provides options to resume the game or return to the main menu.
- **Details:**

- Triggered by pressing a specific key (e.g., Esc).
- Displays overlay with buttons for "Resume" and "Main Menu."
- Enhances user control and improves the player experience by allowing interruptions without losing progress.

### **3. Main Menu Functionality :**

The Main Menu serves as the starting point of the game, allowing players to navigate to different parts of the game. It includes a car-themed background and soothing background music to enhance the ambiance.

#### **Details:**

Buttons: Play, Lobby, and Quit Game.

Background music matches the car racing theme.

## Game Screen shots





# Level: Free Drive







## Video Link:

<https://drive.google.com/file/d/1Ws8IA4UdZyfdMyMqWP4gWSrM9Mp90sf-/view?usp=sharing>