

DeliveryDash

Design Spec:

1. What is the nature of the gameplay? That is, what challenges will the player face? What actions will the player take to overcome those challenges?
 - A car driving game where the player has to reach the destination (travel a certain distance) in a specified amount of time.
 - The player has health that goes down if they hit other vehicles.
 - If the player doesn't reach the destination in the allotted time they lose.
 - The player has control of their speed.
 - If the player is going over the speed limit and a cop sees them (cop car on the screen) they lose instantly.
2. What is the victory condition for the game? What is the player trying to Achieve?
 - If the player reaches the destination in the amount of time they win.
3. What is the player's interaction model (mouse/keyboard)?
 - (WASD or Arrow Keys) for gameplay (move car)
 - Mouse for menu and keyboard
4. What is the general structure of the game? What is going on in each mode, and what function does each mode fulfil?
 - Regular (Certain amount of crashes allowed)
 - Sudden Death (Only 1 crash allowed)
5. Does the game have a narrative or story as it goes along? If so, summarize the Plot.
 - N/A
6. Why would anyone want to play this game? What sort of people would be attracted to this game?
 - People who like games

Code Submission:

Your current code with supporting files, which should have implemented the following:

User Interface/Menu design -- no implementation is needed

all classes should be designed and at least one class partially implemented

all sound/image files you need for your game

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Inspiration:



Classes and Game Elements:

Player's Car

- Three different car types to choose from:
 - Standard Car: Balanced performance (topSpeed: 150, acceleration: 10)
 - Super Car: High top speed (topSpeed: 250, acceleration: 10)
 - Sport Car: High acceleration (topSpeed: 150, acceleration: 20)
- Donut Power-up: If player has donut powerup they are immune to cops
- Health: Decreases when hitting other vehicles
- Speed Control: Player can accelerate and decelerate

Police Car

- Speed == background speed == -PlayerSpeed (Car is sitting there on the side of the road)
- Detects when player is speeding and triggers game over if player doesn't have donut power-up

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NPC Car

- Speed (NPC cars move backward when Player car speeds up) ($\text{Speed} - \text{PlayerSpeed}$)
- Colliding with these reduces player health

NPC Truck

- Speed (NPC trucks move backward when Player car speeds up)
- Larger size than NPC cars
- Colliding with these reduces player health

Background

- $\text{Speed} == -\text{PlayerSpeed}$
- Scrolls to create the illusion of forward movement

Game

- Time Limit: Countdown timer for reaching destination
- Distance Traveled: Current progress toward destination
- Total Distance: Distance needed to reach destination
- Speed Limit: Maximum legal speed
- Win Flag: Tracks whether player has won

Audio:

- Background Music: Plays during gameplay
- Car Hit Sound: Plays when colliding with other vehicles
- Speed Increase Sound: Plays when accelerating
- Speed Decrease Sound: Plays when decelerating
- Max Speed Sound: Plays when reaching top speed
- Death Sound (explosion): Plays when player dies
- Police Siren: Plays when caught speeding
- Screeching Tire Sound: Plays during sudden stops or turns

Visual Assets:

- Background image (road with scenery)
- Player car images (3 different car types)
- Police car image

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- NPC car image
- NPC truck image
- Donut power-up image
- Menu interface elements

User Interface:

- Main menu with game title
- Car selection interface
- Game mode selection
- In-game HUD showing:
 - Current speed
 - Health remaining
 - Distance traveled
 - Time remaining
 - Speed limit
 - Car type information