

GAME DEVELOPMENT

Challenge 1: Player Movement and Camera Tracking

- **Objective:** Implement player movement and camera tracking using Unity (or your chosen game engine). Ensure the player character moves in response to user input and that the camera follows the player smoothly.
 - **Requirements:**
 - Create a script for basic player movement (e.g., walking, jumping).
 - Implement a camera follow script that tracks the player's movement in real-time.
 - Ensure the player movement feels responsive and smooth.
 - **Extra Features:** Add double-jump or dash mechanics, or implement different camera styles (e.g., zooming in/out based on player actions).
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Challenge 2: Health and Damage System

- **Objective:** Build a health and damage system that allows the player to take damage and lose health. The system should trigger a game over when health reaches zero.
 - **Requirements:**
 - Implement a health system that decreases when the player gets hit by enemies or obstacles.
 - Create a game over screen when the player's health reaches zero.
 - Display health visually, such as with a health bar or hearts.
 - **Extra Features:** Add health regeneration over time or allow players to pick up health packs to restore health.
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Challenge 3: Collectables and Power-ups

- **Objective:** Add collectables (e.g., coins, power-ups) that the player can pick up during gameplay. Ensure the collectables are linked to the player's score or abilities.
- **Requirements:**

- Implement collectables such as coins that increase the player's score when picked up.
 - Introduce power-ups that grant temporary benefits (e.g., increased speed, invincibility).
 - Display the player's score dynamically as they collect items.
 - **Extra Features:** Create a combo system where collecting multiple items in quick succession gives bonus points, or add different types of collectables with unique effects.
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Challenge 4: Level Design and Win/Loss Conditions

- **Objective:** Design and implement a full level with enemies, obstacles, and a win condition. Include a functional main menu, pause menu, and game over screen.
- **Requirements:**
 - Sketch a level layout and place enemies, obstacles, and collectables strategically.
 - Add a win condition (e.g., reaching the end of the level) and a game over screen.
 - Create a functional main menu where players can start the game and a pause menu to resume or exit the game.
- **Extra Features:** Add multiple levels with increasing difficulty, or design secret areas and bonus levels to reward exploration.

These challenges gradually introduce key elements of game development, from basic mechanics to complete level design and user experience features.