Title

- **Game Title**: Debt Runner: WangBu's Journey
- **Name**: Binh Nguyen

High Concept

- **Elevator Pitch:** In "Debt Runner," you play as WangBu, a former billionaire who is now broke and running to collect money to pay off his massive debt. Dodge obstacles and collect enough cash to win—without losing your life to debt!
- **Game Genre:** 3D Endless Runner game
- **Platform and Target Demographics**: PC only; target audience is casual gamers aged 10–30.
- **Features:**
    1. Endless running with increasing difficulty.
    2. Collectible money along the path.
    3. Obstacles that players must jump over, dodge left/right.
    4. Game-over condition upon collision with obstacles.
- **Unique Selling Points:**
    1. Unique backstory of a billionaire losing it all and running to pay off his debt.
    2. Increasing speed and more challenging obstacles as the game progresses.
    3. A combination of jump and side-movement mechanics for varied gameplay.
    4. A "debt meter" showing how much more WangBu needs to collect to reach $5 million.

Gameplay

Setting and Introduction:

- **World:** The game is set in various urban environments where WangBu is running through streets and business districts, trying to collect money.
- **Player Character:** WangBu, a former successful businessman, now runs to pay off his $5 million debt.
- **Backstory:** WangBu's businesses failed, leaving him deep in debt. Desperate for a comeback, he runs through different locations, collecting cash to survive and avoid bankruptcy.
- **Main Problem:** Players must help WangBu avoid obstacles and collect $5 million to win.

Game Mechanics:

- **Movement:** The player controls WangBu, who runs forward automatically.
- **Jumping:** The player must press the spacebar to jump over obstacles.
- **Side Movement:** Use A or left arrow key to move left, and D or right arrow key to move right.
- **Obstacle Collisions:** If WangBu hits an obstacle, the game is over.
- **Money Collection:** Collect money scattered on the path to increase the debt meter. Reach $5 million to win.

Systems:

- **Movement System:** Controls WangBu's running, jumping, and side movements.
- **Obstacle System:** Randomly generated obstacles that appear in the player's path.
- **Money Collection System:** Scattered money items on the path that the player must collect to increase the debt meter.

- **Game Over System:** Ends the game when WangBu hits an obstacle.
- **Progression System:** As the player collects more money, the game speeds up, and obstacles become more challenging.

Game Content

Art Assets:

- **Environments:** Simple urban areas for the running path.
- **Character Model:** 3D model of WangBu, dressed in a business suit turned casual, representing his fall from wealth.
- **Obstacles**: Fences to jump over, barriers to dodge.
- **Money Icons:** Cash bundles or coins scattered along the running path.

Sound Effects:

- **Background Music:** Fast-paced running music to match the game's intensity.
- **SFX:** Jumping, collecting money, and game-over sounds.

Timeline

- **10/11 - Initial GDD Submission:**
    - Complete the GDD with a detailed breakdown of the game idea, gameplay, and content.
- **11/11 - Partial Prototype:**
    - Implement basic running mechanics, obstacle avoidance, and money collection.

- The prototype should allow for jumping, moving left/right, and basic game-over functionality.

- **12/6 - Final Game Code:**
  - Fully functional endless runner with all gameplay mechanics, art assets, sound effects, and win/lose conditions implemented.

Appendices

Appendix A:

How the Components of the Prototype Fit into the Overall Game Design:

- The partial prototype includes the core elements essential to Debt Runner: WangBu's Journey. It focuses on implementing basic player movement (running, jumping, and side-movement), obstacle avoidance, and a money collection system, though the full collection functionality is still in progress. These components form the foundational gameplay loop of an endless runner and align with the game's core concept of collecting money while avoiding obstacles.
- The components developed in this prototype provide a playable experience that represents the main mechanics, allowing early playtesting to ensure the game's core objectives are clear and engaging.

Steps Completed to Reach the Partial Prototype Submission:

- Established running mechanics to allow WangBu to move forward continuously, creating the basic runner experience.
- Implemented jumping and side movement controls, giving players the ability to dodge obstacles.
- Set up an obstacle system to spawn objects randomly along the player's path, introducing a core challenge.

- Developed a money/coin system, creating the coins but with collection functionality still in progress.

Next Steps in Refining the Prototype:

- Finalize the system to allow the player to collect coins, which will increase the money count and provide visual/sound feedback.
- Introduce progressive increases in game speed and obstacle complexity to align with the debt meter objective.
- Display a debt meter to show players how close they are to reaching the goal, aligning gameplay with the game's backstory.
- Replace temporary or incomplete assets and effects with final, polished versions for improved visual and gameplay quality.
- Ensure that the core mechanics—particularly obstacle generation and coin placement—are balanced for fair and engaging gameplay.
- Adding sound effects and background music to enhance the player experience.

Appendix B:

Potential Advanced Topics to Integrate:

- Procedural Generation of Obstacles and Coins: Explore more complex procedural generation for obstacle placement and coin spawning to create a unique experience in every run.

- Special Effects for Coin Collection: Plan to add particle effects and sound effects that make coin collection feel more satisfying, contributing to immersion.

- UI Enhancements and Feedback: Create an interactive debt meter that not only shows progress but also reflects the player's speed and difficulty level dynamically.

Appendix C:

- In the partial prototype, I used some asses from Unity store (for the street, material of the coin), and obstacle (from course library in our course). For the coin, I created a cylinder, adjusted its size to a coin and applied the texture to make it look like a gold coin. I got the texture from Unity asset store. The character is also from the course library of prototype 3. I placed him in the scene and applied PlayerController script to make it run, jump, side-move.
- For the scripts, I wrote most of them. However, sometimes I used ChatGPT to help me fix some bug if I spent an amount of time but still not be able to figure out.
- Thanks to ChatGPT, I learned how to use [SerializeField] attribute in Unity to make private variables editable in the **Inspector** without needing to make them public.