Game Design Document (GDD)

Project Title: Forest Fox Adventure

Genre: 2D Platformer

Platform: PC (Windows)

Engine: unreal engine 5.5

**1. Game Concept**

The player controls a fox character exploring a vibrant forest landscape, navigating platforms, avoiding obstacles, and possibly collecting items or solving light puzzles.

**2. Introduction**

The concept, structure, gameplay, and technical details Forest Fox Adventure. It is aimed at providing a clear vision for the development team.

**3. Game Objectives**

- Reach the end of each level without dying.  
- Collect items (e.g., berries, coins).  
- Avoid or defeat enemies.  
- Complete levels to unlock the next stages.

**4. Game Structure**

The game is level-based, each stage increasing in complexity. Players must complete objectives, avoid enemies, and reach the level exit.

**5. Controls**

Arrow Keys / WASD - Move  
Spacebar - Jump

**6. Scoring**

Players earn points by:  
- Collecting items (coins, berries)  
- Defeating enemies  
- Completing levels quickly

**7. Action**

The player can perform actions such as jumping, picking up objects, attacking, and interacting with the environment.

**8. Movement**

The fox can run left and right, jump, and fall. Movement is smooth and physics-based for natural gameplay.

**9. Game Elements**

- Player (fox)  
- Enemies (patrolling creatures)  
- Collectibles (coins, berries)  
- Platforms and hazards  
- Doors and switches

**10. Core Features**

- Smooth 2D platformer movement (jumping, running).  
- Animated player character (fox).  
- Tile-based terrain (grass, dirt, bricks).  
- Background parallax scrolling (trees, sky).  
- A simple start and end to the level.  
- Simple HUD (score, lives).

**11. Assets**

Sprites:  
- Fox character (idle, run, jump, death)  
- Tileset (grass, ground, bricks)  
- Background elements (trees, bushes, sky)  
- House (static background prop)

**12. Technical Design**

Implemented using unreal engine (5.5).  
- Scene-based levels  
- Player controller using Rigidbody2D and physics colliders  
- Tile map for level layout  
- Trigger-based goal detection  
- Possibly basic enemy AI using path finding

**13. Future Additions (Stretch Goals)**

- Add enemies with simple AI  
- Add a scoring system or collectibles  
- Multiple levels with increasing difficulty  
- Game start menu and level select screen

1. **Overview**

Forest Fox Adventure is a 2D side-scrolling plat former game featuring a fox navigating through a colorful forest world. The player avoids enemies, collects items, and overcomes obstacles to complete levels.