

# **Game Design Document**

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## **Untitled 3D Game Development Project**

### **Chapter 1 - Overview**

#### **- Chapter 1.1 - Genre/Gameplay**

This game is intended to be an open world RPG, with a focus on exploration and a dynamic skill tree. Gameplay is a first person action combat, with a fully open large skill tree that can be navigated from any starting point, taking inspiration from Path of Exile.

#### **- Chapter 1.3 - Story**

The current story is underdeveloped due to it being a short demo, however the hypothetical premise is as follows. All the creatures and characters in this game are mushrooms, however a toxin has turned some of them into feral creatures attempting to harm both the non affected and each other. It falls into the duty of you (the main character) to exterminate these feral creatures and find a cure.

### **Chapter 2 - World Specifics**

#### **- Chapter 2.1 - Upgrades**

Leveling up currently gives one power per level, however as noted in “Chapter 4.4 - Skill Tree Expansion”, future plans are to give the player a dynamic skill tree that can be upgraded throughout the game.

#### **- Chapter 2.2 - Monsters**

There are currently 5 mushroom monsters:

1. Red Mushroom - Basic movement but when within attack range of the player it will launch itself up into the air and attempt to squash the player upon landing.

2. Blue Mushroom - This mushroom has basic movement but when within attack range it will do a horizontal dash attack to the player.
3. Green Mushroom - A simple mushroom that bounces and attacks, but upon death splits into 4 smaller green mushrooms.
4. Black Mushroom - The simplest enemy, with normal movement but will knock the player back upon contact
5. BFM - The largest mushroom with the biggest health pool, it will periodically spawn a random colored mushroom

### - **Chapter 2.3 - Quests**

There are currently 3 quests built into the game, and completing all three quests will complete the demo.

1. Do a little dance - Tutorial to give the grasp of the movement, upon moving around and jumping a few times this quest will complete
2. Exterminate 5 mushrooms - a simple quest to give users the combat tutorial, they must wait until night and enter the field to slay 5 mushrooms of any color
3. Reach max level - given to show players the level/ability system, upon reaching level 10 this quest will auto-complete

### - **Chapter 2.4 - NPCs**

The only NPC in the game is a small blue man named Hector, who resides within the safe town and will give quests to the player.

### - **Chapter 2.5 - Safe Town**

The player spawns within the safe town in the corner of the field, this area is protected from the mushrooms and will bounce them away if they attempt to enter.

## **Chapter 3 - Technical Aspects**

### - **Chapter 3.1 - Hardware**

Current build is very lightweight, so most modern or semi-recent laptops or PCs should be capable of running this game. Recommended specs are an Intel i5 processor, 8 GB+ of RAM, and a minimum of 16 GB of storage.

- **Chapter 3.2 - Software**

Current build is for Linux, specifically Ubuntu 20.x+ is recommended, future OS releases may be developed. This game utilizes C/C++ for quick and lightweight infrastructure, SDL2 for GUI display, and Vulkan API for 3D rendering.

## **Chapter 4 - Next Steps**

- **Chapter 4.1 - Modeling**

Current models are textured cubes, however in future expansions these would be replaced with properly made 3D models of mushrooms, fences, etc.

- **Chapter 4.2 - Gameplay**

Classes are planned, and replacing the current combat system with 3D weapon models and dynamic hit boxes would be ideal.

- **Chapter 4.3 - World Expansion**

The demo map is quite small and flat, ideally a very large open world environment with hazards and world interactables would be implemented.

- **Chapter 4.4 - Skill Tree Expansion**

The skill tree is currently linear and given upon leveling, however a large skill tree with different starting areas and dynamic progression is the goal.