

## 1. Background Setting

We have created a survival shooting game with Roguelike elements, where players will experience survival challenges in a perilous wasteland. In this game, players will face surprises every three minutes and despair every five minutes in a battle for survival. The game centers around dynamic environments and random events, reducing the repetitiveness of monster farming by adding randomness.



## 2. Characters and Growth

In the game, players can choose from three initial characters, each with unique skills and traits. Through randomly dropped rewards, pets, random events, and character ability synergies, each playthrough offers a fresh experience, providing variety and depth to the game.

## 3. Game Mechanics

### 3.1 Monster Spawning Mechanism

Enemies spawn from random positions along the edges of the screen and constantly move towards the player, increasing the uncertainty and tension of the battles.

### 3.2 Monster Types

There are two main types of enemies: normal mobs and bosses. Mobs are numerous but scattered in threat, while bosses have independent health bars and special skills, representing significant challenges during combat.

### 3.3 Shooting Trajectory

Players aim and shoot with the mouse, where precise control directly impacts the outcome of the battle, enhancing the fusion of operation and strategy.

### 3.4 Reward Mechanism

Players can earn rewards, such as experience points and item drops, by defeating enemies. These rewards progressively enhance character abilities, laying a solid foundation for subsequent battles.



#### 4. Dynamics and Challenges

Unlike traditional Roguelike games, players may encounter dynamic events in each level, such as weather changes or terrain alterations. For instance, sudden sandstorms may impair visibility, or terrain traps may restrict movement. These dynamic changes, combined with the random mechanics, significantly increase the game's randomness and challenge.



#### 5. Worldview and Storyline

We integrate the post-apocalyptic world into the game through the main storyline. Each character's growth path is closely tied to the plot. As players progress through levels, they will not only unlock more game content but also gradually uncover the truth behind the wasteland world.



#### 6. Technology and Development Process

During development, we adopted an agile process and used tools such as user case diagrams, class diagrams, and communication diagrams to design the user experience. We ensured the

clear implementation of game mechanics. Key modules like monster spawning, the ballistic system, and reward design were repeatedly tested and optimized to ensure smooth and balanced combat experiences. We utilized GitHub for branch management and version control, ensuring efficient teamwork and high-quality code. Through the application of these software engineering techniques, we not only created this challenging and strategic game but also gained a deeper understanding of team collaboration and software development.