Bilkent University

Department of Computer Engineering

CS 319  
Object Oriented Software Engineering   
Analysis Report

Survival in Bilkent

Group 2M

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1. **Introduction**
2. **Overview**

After launching the game player encounters game menu which has “Start Game”, “Options” and “Quit” buttons. The game commences when the player chooses “Start Game” option. “Options” will take the player to the Options menu where he will be able to modify sound settings. “Quit” option terminates the game.

When the game commences player will encounter various types of enemies that will try to kill him by shooting or crashing into it. The players objective is to survive the level without running out of time (player will only have time instead of health which will decrement as the time passes and additionally decrements when taken damage) by shooting the enemy units while collecting miscellaneous power-ups, keys, chests and coins. At the end of each level player will face stronger enemy units which are called “Finals”. To player to proceed, player does not need to defeat every Final but a minimum number (depending on the level or circumstances) of Finals must be defeated. Yet, the undefeated Finals will come back again in the next levels Finals Phase in addition to that levels Finals. After the level is completed by the player game will enter an upgrade phase in which player will be able to upgrade his stats by spending coins on standard shop items or open chests by using a key and a chest which was collected in the previous level. Game will have a total of 4 levels and 4 upgrade phases.

* 1. **Controls**

The player can move around with W-A-S-D keys on the keyboard. W for going up, S for going down, A for left and D for right movement. Shooting and aiming will be done by using the mouse. Clicking with the left click shoots bullets around. Pointing the mouse on the screen will change the aim of shooting.

* 1. **Levels**

As mentioned before the game will contain 4 levels with increasing difficulty. (smarter enemy AI, higher enemy health, enemies that hit harder) Each level will bring at least one different enemy type to the game mechanism. The player will try to defeat standard enemy types without running out of time. If player does defeat the standard enemies the Finals will arrive, pushing game difficulty to higher. When required minimum number of Finals are defeated player will earn the right to proceed to next level. The level can be completed in two ways; first one being the defeating all the Final enemies which guarantees that there will be extra Final enemies in the next level, second one being defeating minimum required number of enemies which will result as undefeated Final enemies returning in the next levels Finals Phase.

* 1. **Enemy Types**

There will be various types of enemies that player will come across during the game. These enemies will be harmonious with our theme.

**Bug:** The most common and weak enemy type which will simply crash into player to damage him. Yet, this crash will damage it as well. It cannot shoot bullets, it is only capable of crashing.

**Assignments:** Basically, tougher versions of bugs that will hit harder and sustain more damage.

**Quiz:** Quizzes can spawn very close to the player. It has average damage, can move around and has low health. It can also shoot bullets.

**Lab:** A slow moving enemy type that will spawn bugs and assignments continuously unless it is destroyed. It has high health, it cannot shoot bullets.

**Midterm:** This enemy type is quite rare in comparison to others. It has more health than Labs and applies more damage by shooting bullets. It can move around. It is the most dangerous enemy type excluding Finals.

**Finals:** Finals come as a pack unlike Midterms. Yet, they spawn when there are no other enemies left for that level. They have more health and apply more damage by shooting. They will have a shield additional to their health, which will regenerate unless they are kept shot at.