Teal Team 6

CS Survivor Request for
Proposal Version 1.0

Document History

Version	When	Who	What
1.0	9/13/24	Sam, Daniel, Zac, Ashton, Devon, Ben	Initial Draft

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1.0 Project Description

The intended goal for this project is to make a single player 3D First Person Shooter (FPS) game called CS Survivor about defending yourself from computer science concepts by getting weapons of mass destruction from Computer Science professors who work at University of Idaho. To be specific, enemies will be portrayed as pictures of programming errors with arms and legs. Hostiles such as segmentation faults, syntax errors, and infinite loops will suddenly appear in an attempt to destroy you. We believe that this game has a high potential for success in both market and profits as the Computer Science students at the University of Idaho will be blown away due to its unique game design and fun mechanics directly related to the professors of their classes.

2.0 Project Objectives

The objective is to create a slower-paced action roguelike. A game that players can enjoy playing for a long amount of time due to a great variety in gameplay created by a large number of different ways to play the game, as well as out-of-game and in-game progression to give the player a sense of growth.
The following features should be implemented in the game:
- Player
  - Able to move around the map area
  - Can save statistics
  - Can attack enemies
  - Can interact with the stores to buy or sell items
  - Can despawn, then respawn when killed
- Enemies
  - Can be generated automatically into the map
  - Able to attack the player if they get close enough
  - Give the player currency on death and despawn
- Items
  - Can be bought from store keepers with currency
  - Current items held by the player can be sold for currency
  - Items increase the power of the player or do something useful
- Skills
  - Can be purchased in the home area for currency that carries over between games.
- Audio
  - Includes background music tracks
  - Voice acting for the store keepers

- ○ Sound effects for the player, stores, enemies, and User Interface
- Level
  - ○ The game starts with the player in a home level without enemies
  - ○ On pressing the play button in the home area, the pre-made map is generated with both the player and enemies in it
  - ○ Level scales difficulty to adjust to the player growing in power
- Menu/User Interface
  - ○ Player can see what items they have through an openable menu
  - ○ Heads Up Display to show health, stamina, and current weapons
  - ○ Can toggle audio sources on and off
  - ○ Can access a pause menu that includes settings for key bindings and a help screen
- Save/Load
  - ○ Can save state of the game in the pause menu
  - ○ Can load saved state from the pause menu or the home area

3.0 Similar Systems

Vampire Survivors
- Vampire Survivors is a top-down isometric, action roguelike game developed by Luca "Poncle" Galante and published in 2022. The player controls a character who automatically attacks nearby enemies. The goal is to survive the bombardment of constant waves of monsters for as long as possible while unlocking different characters, weapons, and relics for later sessions. Each session has a soft time limit of up to 30 minutes depending on the stage, and between sessions gold collected can be spent to unlock new stages, weapons, characters, and more.

Risk of Rain 2
- Risk of Rain 2 is a roguelite third-person shooter developed by Hopoo Games and published by Gearbox Publishing in 2019 as a sequel to 2013 Risk of Rain. The player controls a survivor that must progress through a series of levels (different alien planets) where the goal is to kill alien monsters while locating the teleporter to the next level. Enemies defeated award experience and different currencies used to loot chests and level up the player to enhance their abilities.

4.0 Intended users and their basic interaction with the system

The intended users for our product are prospective CS students with a love for games and humorous quips from University of Idaho's computer science department. Interactions include installing, launching the game, surviving various waves of CS 'threats', banking rewards and participating in a rich in-depth economy, purchasing weapons, powerups, and other utility-based items; all with the goal of surviving until defeated.

Users: [Guns Violence]
- Small range of players, intended for those with some experience playing shooting games, and any experience with an in-game economy.

Uses
- Providing fun and engaging gameplay
- High replayability
- Opportunity to familiarize users with known CS problems and errors
- Fun economy where smart allocation of funds will be necessary for success

5.0 Known interactions with other systems within or outside of the client organization

Our project won't need access to any network or files outside of itself. As such, the project won't be interacting with any other systems.

6.0 Known Constraints to Development

- Developer availability (6 devs, 12% FTE for 3 mo = 360 phrs)
- Technical limitations (our computers are mid)
- External cooperation (we need teachers to VA for us)

7.0 Project Schedule

Date:	Description:
September 13, 2024	Submit RFP
September 14, 2024	Submit Champion Documents
September 19, 2024	SA Demos
September 26, 2024	Repository Chosen and Submitted
October 3, 2024	Initial draft of the code should compile and run
October 16, 2024	Have two compile paths, production and testing, and run them both
November 20, 2024	Final Product Due
December 5, 2024	Final Presentation

8.0 How to Submit Proposals

Please contact us at proposals@cs-survivor.com to submit a proposal. For any questions, contact us at 208 555 4567.

9.0 Dates

Proposals must be submitted by 12:00pm PST on September 19, 2024. Decisions will be made and all applicants will be notified by 5:00 pm PST on September 26, 2024.

10.0 Glossary

- First Person Shooter: a game where the player uses a digital shooting weapon while immersed in the game via a first person camera.
- Segmentation Fault: a common programming error caused by attempting to read memory that is out of bounds.
- Syntax Error: a common programming error caused by attempting to run a malformed program.
- Infinite Loop: a common programming error caused by letting a program perform the same instructions over and over again.
- FTE: full time equivalence (ie, 40 hours a week)