Software Architecture Documentation

Game: Sewer Quest by Susan Chen and Samantha Lam

Project Description

Sewer Quest will be a roguelike/dungeon crawler game in top down view. The main player will be a cat looking for fish in a sewage with harmful rodents. The player must collect all the fishes of the level to proceed to the next level. Each level will have rooms, patterned like a maze with dead ends. Some rooms may contain a fish, so players must visit most rooms to obtain all the fishes. Level 2 will have more rooms than level 1, more fishes, faster enemies, and will have more dead ends. Player will take damage from rodent enemies, up to 3 times before it is game over. Player will be able to slay the evil rodents with magical cat bullets.

Game Features/Mechanics

- Player move around with left, right, up, down key and may shoot with the 'z' key
- Player will have 3 health points located at the top left of the game screen
- Enemies will do 1 health point damage to player
- Enemies will be slayed with one bullet
- Score will depend on time and enemies killed
- The game will have a time limit and will be displayed at the bottom along with remaining fishes and the current score
- Game over if time limit is reached or player loses all their health points
- Rooms connect to other rooms through corridors

- The first room where the player spawns will have basic instructions on how to play the game

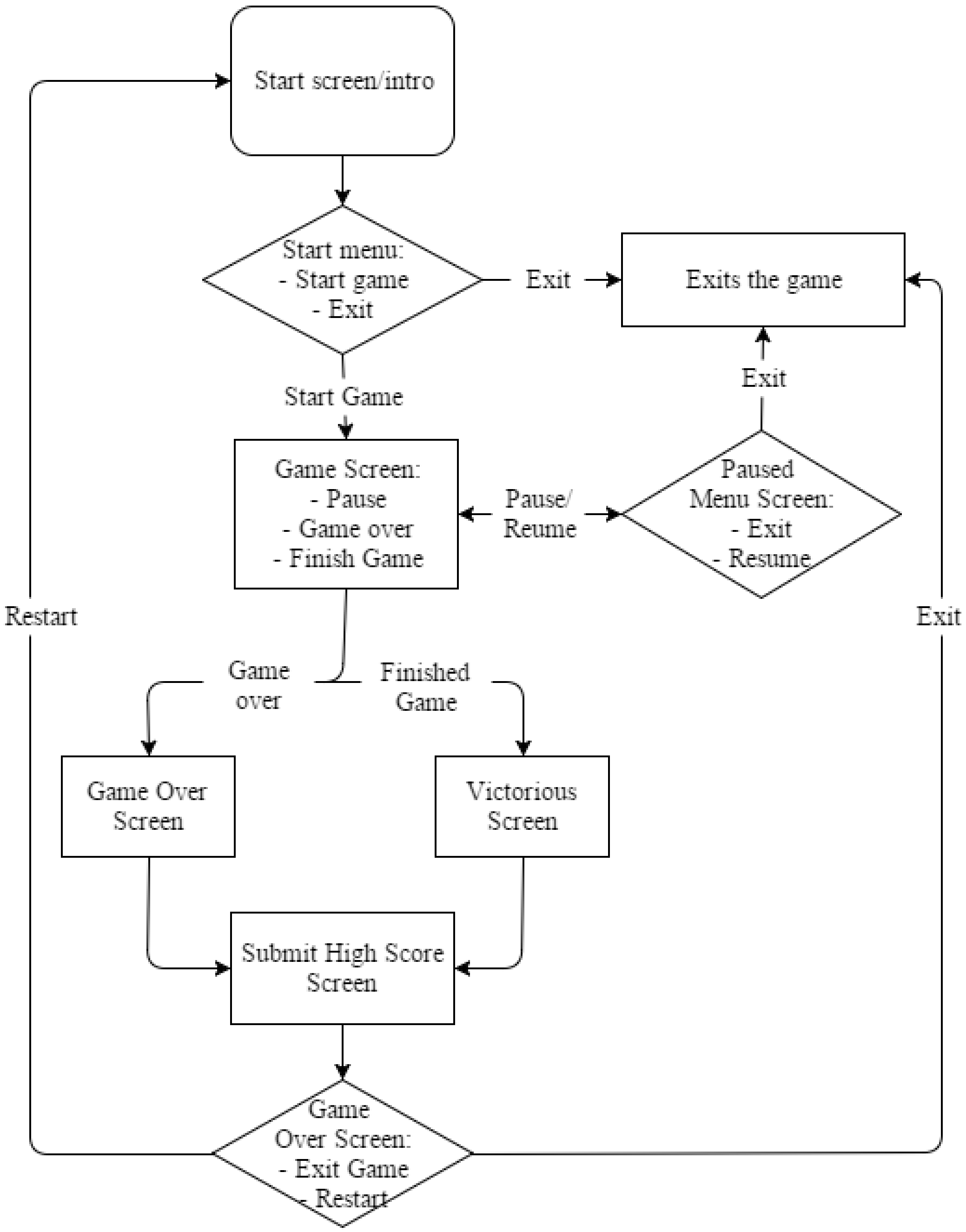
- There will be a mini map that shows all the rooms that you have visited at the top left of the game screen

Timeline

Progress so far: Player may move, shoot, and lose health. Enemies may die when collided with a bullet, damage player, and move towards player. Rooms have functioning doors, and walls and objects that player and enemies can not walk through. Bullet will disappear if it hits a wall or enemy.

Date	Goal
Apr. 21	Add all on screen features (health, score, time, and fishes)
Apr. 25	Implement audio, pause function, and mute audio function
Apr. 27	Finish high score screen
Apr. 28	Work on start menu, game over menu, and pause menu
May 2	Finish start menu, game over menu, and pause menu
May 5	Create transitions between each screen
May 9	Improve player and enemy movements
May 11	Replace placeholder images and implement player and enemy animation
May 12	Test game and debug
May 16	Continue test or implement better enemy AI

Screens


Start screen/intro
Start menu:
- Start game
- Exit
Exit
Exits the game
Start Game
Exit
Game Screen:
- Pause
- Game over
- Finish Game
Pause/
Reume
Paused
Menu Screen:
- Exit
- Resume
Restart
Exit
Game
over
Finished
Game
Game Over
Screen
Victorious
Screen
Submit High Score
Screen
Game
Over Screen:
- Exit Game
- Restart

Data Structures

- Coordinates of all walls and unpassable blocks will be stored in a list
- All sprites of similar direction and functionality are stored in a list
- All rooms, enemies, and bullets are stored in its own list
- All connects of room corridors are stored in a dictionary
- All image files are stored in assets\images directory
- All audio files are stored in assets\audio directory
- High scores will be stored in the highscore.txt file structured like:

name, score

name2, score2

so on….