Proposal For Java Project

Introduction

We plan to make a real-time third-person shooter game, featuring battles of tanks. Unlike the battleship game in which players make moves in their turn, this game allow players to make moves anytime, as long as their tank is still alive. A single-player mode and a multiplayer mode will be provided. In single-player mode, the player will experience an individual adventures, where Maze and optional AI enemies will be available. For multiplayer mode, tanks from two factions controlled by players will fight each other in several maps.

How to achieve

- Java Swing and AWT for GUI.
- Java Timer.
- Java socket or other Java internet tools.
- Need to repaint the panel after each time slice.
- Might use multi-threading to make a more than 2 player mode if achievable in this semester.(No gaurantee).

Key features

pixelartmaker.com

- A JAVA GUI showing the game frame, inculding tanks, maps, items, statistics.
- A single-player mode and a multiplayer mode.

- It allows player to move and shoot bullets by keyboard.
- A statistics panel showing health, items, etc.
- Maze and optional AI enemies in single-player mode.
- Competitive battles in multi-player mode.
- items include health revert, damage buff, weapons etc.
- Each player is able to choose a helpful skill.

Maze in single-player mode
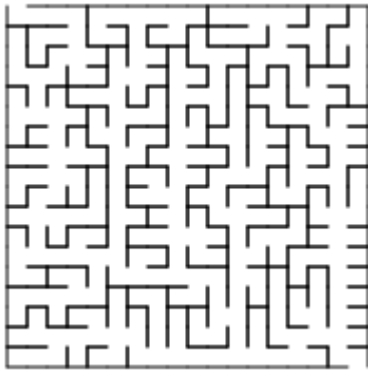
*(The actual maze in game may not look the same as the left maze)*

In the single-player mode, the player need to enter a maze and must find the exit to win. However, the game UI only shows a small part of the maze (as the following shows). Of course, in the maze, there are some enemies who will attack the player, some rewards, and some quests other than finding the exit. (eg. "o" is reward, "x" is the enemy and "?" represents a quest).

- Enemy: move around on a certain path , and stop and fire when it detect the player.
- Reward: some powerful items
- Quest: the player is asked to find a certain reward or beat a certain enemy. The player can ignore the quest.
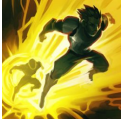
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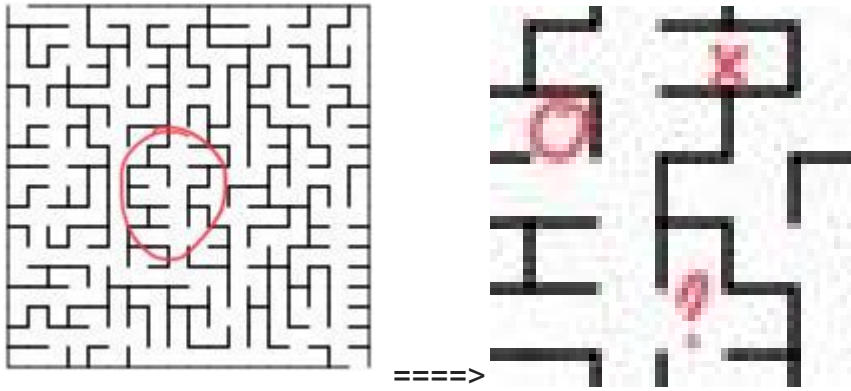
Multi-players Mode

For multiplayer mode, tanks from two factions controlled by players will fight each other in several maps(as the example below). Once a player destroy the tank controlled by the other player, the player can get a point and the other player will respawn in a random location.
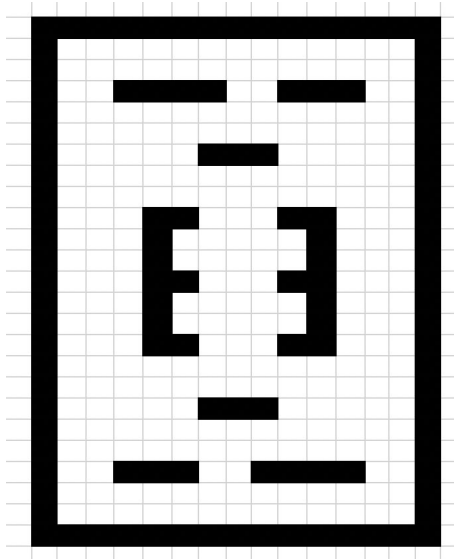
Items

- Medical Kit: restore a certern amount of health.
- Speed Kit: player gains a bufff increaing its speed after going to the item's location.
- Laser Gun: the player is able to shoot laser.
- Clock Potion: The player is able to use skill immediately.

Skills

- Flash : Blick the player a short distance toward target location.

- Heal :Health revert of a certain amount.

- The World : The player can stop time for 5 seconds and during this period only the player can move or attack. However, during this period, other players can still use skills.

Schedule and Partition

- By July 25th: Basic GUI functions is implements, player is able to control a tank in single player mode, and exit the game.
- By August 1st: Tank is able to shot , grab items, use its skills in single player game. Enemies in single player game should be implemented too.
- By August 8th: Finish the multiplayer mode in which two players compete with each other via internet.
- By August 16th: Smooth movement should be guaranteed in the multiplayer mode, work on debugging and maintenance. All basic features should be completed.

Rongyi Zhang: Basic GUI and multiplayer.
Jiahuang Wang: multiplayer and tank skills, items.
Minghao Zhu : Single player mode, mazes, enemies in single player mode.