

Plan for upcoming phases:

Coming out of Phase 1, we want to complete sample code so it's convenient for us to test our ideas. It is a simple code based on text display of a 2-D array. This reduces errors in our thinking when it later comes to accomplishing GUI-related tasks.

At each stage, we may come across concepts we haven't touched on, but we will discuss it with each other via discord and share our work progress on gitlab and discord to attack the problem together.

The work encountered in each phase will be assigned to each person, and team members can suggest aspects they are good at and solve such problems. If no one is suitable to solve the problem, the problem will be discussed and solved together. In order to ensure the work progress, a discord debriefing one or two days a week is necessary.

We will use Java Swing/AWT/JavaFX to draw the board, represented as a 2-D array. Initial tests and operations will rely on sample code to implement, just like the collisions between characters, disappearance of characters, movement, etc.

Description of the game:

This arcade style 2D game has one main character which will be controlled by the player via keyboard input. Each keyboard input will go through a "tick" of the game. At the start of the game, the player will begin with a positive score and has to move through a maze with only up, down, left, and right.

The maze is a 2D grid game board surrounded by walls; within the walls, barriers, enemies and rewards are scattered all over. When the game starts, the main character enters through the entrance on the side of the wall, and the entrance closes after entry. Only when the protagonist reaches the goal, the exit on the side of the board will open and the player can control the main character to reach the exit to win the game.

In this game, there are two types of enemies: One type of enemy can move, toward any of the four directions, one cell at each tick and it will move along the path closest to the main character. The other type of enemy cannot move. If the main character collides with a static enemy, the main character will be punished (scores will be deducted) and the enemy will disappear. For a moving enemy, collision will result in an instant failure. On the other hand, collision with a static enemy will only cause a failure if the resulting point deduction makes the character's score negative.

Other than enemies, there also exist other types of entities within the maze, namely, rewards. Rewards also have two types, with one being a regular reward and the other being a bonus reward. To win the game, the player must control the main character to collect all regular rewards; this will unlock the exit, and exiting will mean victory. But if the player wishes to, the player can complete achievements by getting all kinds of rewards first before reaching the exit.

The theme of the game is such that the main character is an eagle attempting to evade capture by human hunters. Whilst avoiding mobile humans and immobile snakes, the eagle must collect chickens and potentially the occasional egg. This will be done by navigating around clusters of trees.