

## The Snake Project

### Introduction

This is my first java project in which I have created a graphic snake game. Snake is the old classic game first developed around the 1970s. In this game, the user has the access to control the snake. The main idea is to feed the snake and don't let it bite itself. The more you feed, the more score you get. The entire source code of the project can be found in my repository. The codes can be found in the snakecode package. All codes are well commented and if you have any comments, feel free to add it.

### Requirements:

Java Runtime installed in the system.

### How to play:

Execute the game.java file. I will add the jar file later.

### Development of Java project.

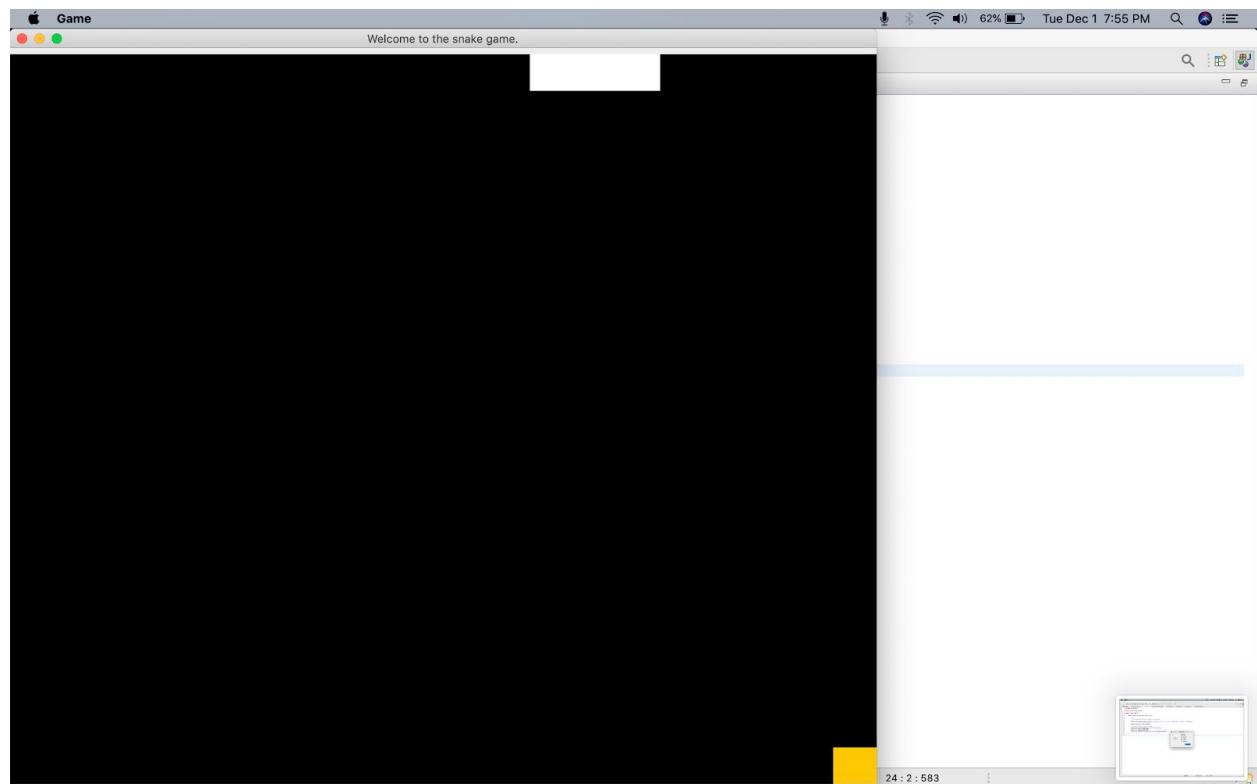
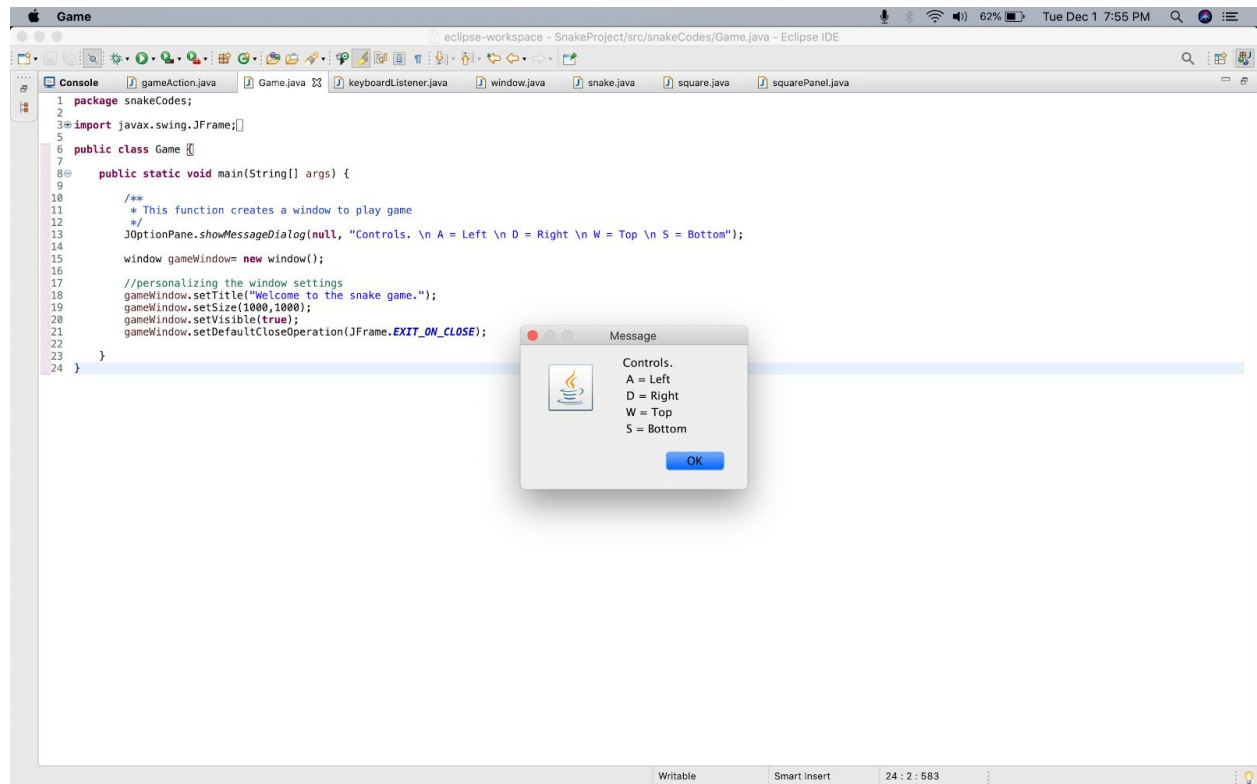
This project uses java Swing and threads to display the game and keyAdapter to map the keys pressed to move the snake.

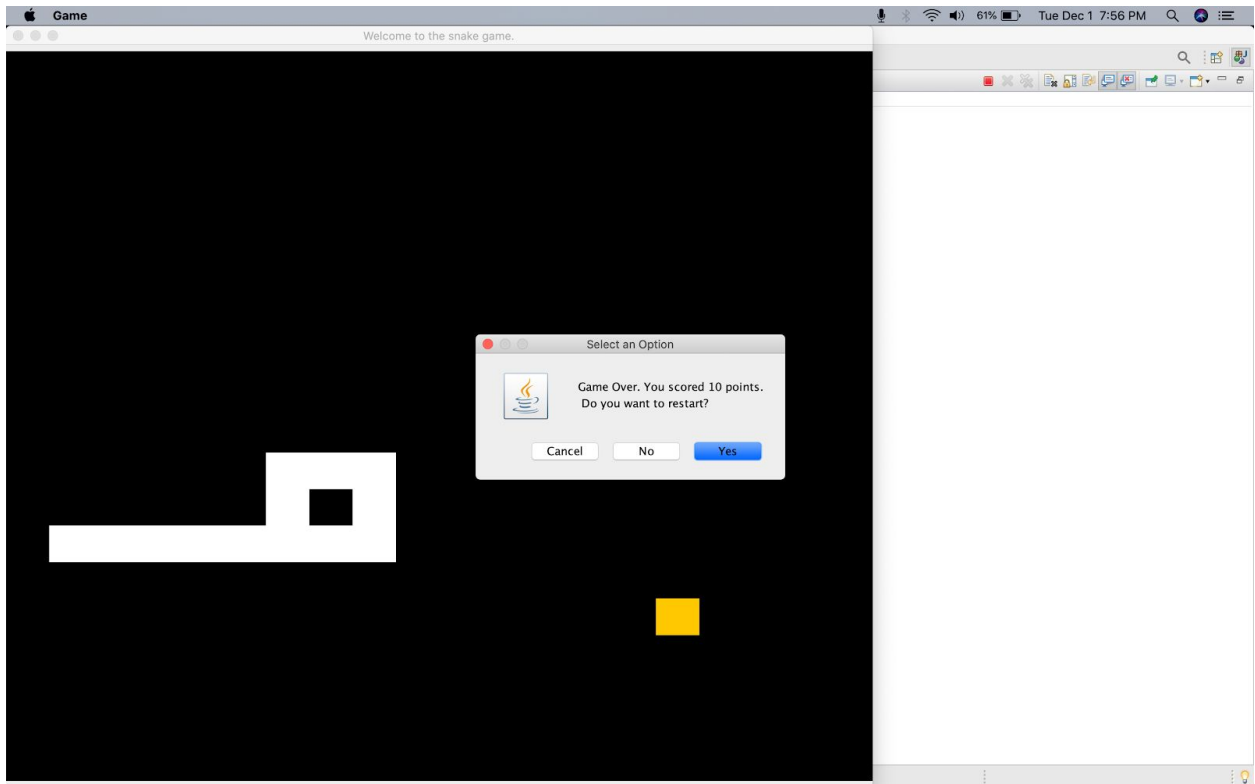
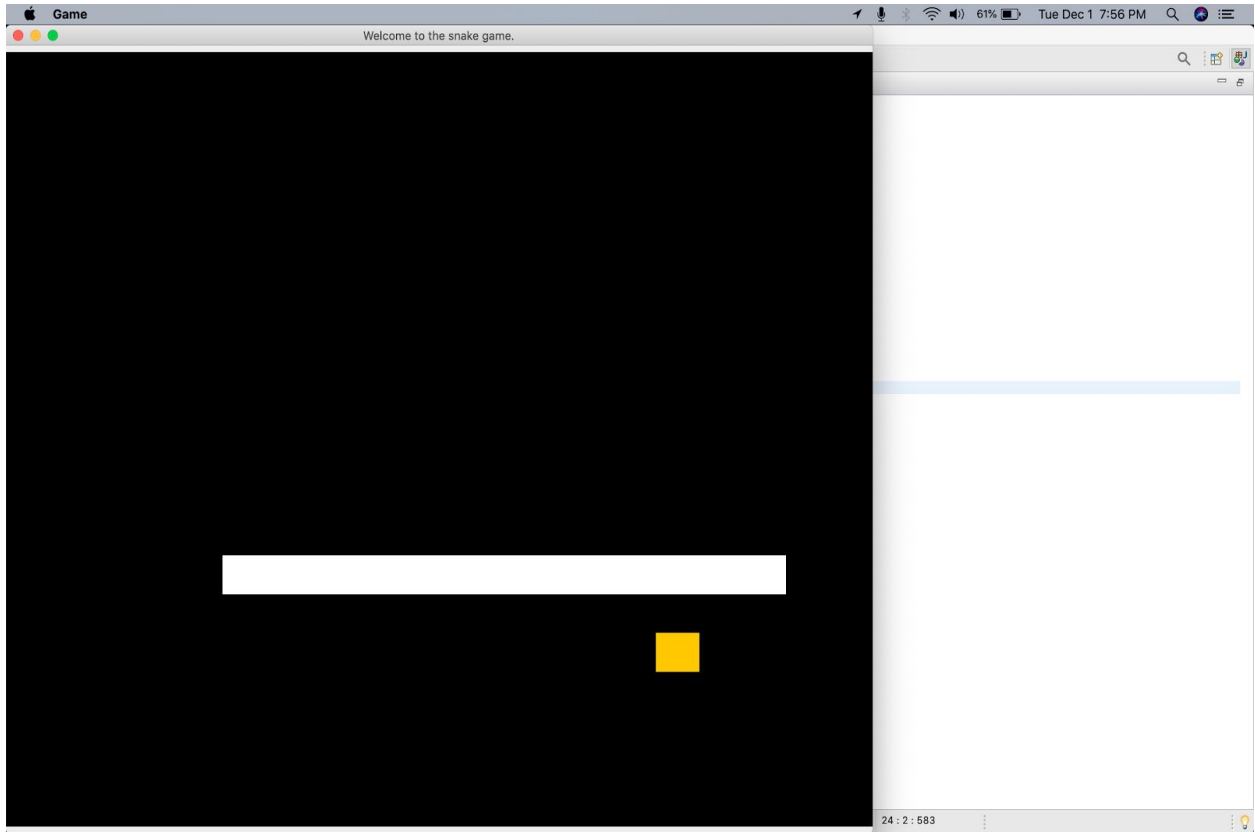
Following are the brief description of the codes in the package:

- a. square.java: This code contains a class that assigns the color code to the snake, food and the environment of the game.
- b. squarePanel.java: This code contains a class that sets the background to the game displayed.

- c. `snake.java`: This code contains a class that defines the attributes of the snake from its position to the way of movement.
- d. `keyboardListener.java`: This code contains a class that uses `keyAdapter` to map the keys pressed by the user.
- e. `window.java`: This code contains the class that personalizes the window where the game is played.
- f. `gameAction.java`: This code is the brain of the project. All the controls of the game are stored in this code. This code assigns the size and the speed to the snake in the beginning and adds them as the game progresses. The score and the highest integers are used to track the current and the highest scores respectively. The `initializeGame()` method starts the game and it runs until the snake bites itself which is checked by the `checkCollision()` method. When the game is being played, the score is increased as well as the size and speed of the snake when the food is eaten by the snake. The `newFood(field)` method adds new food in a new position when the snake eats the food. When the `checkCollision()` confirms that the snake has bitten itself, the java dialog box is shown where the user is notified about the score and given the option to restart the game. If the user wishes to restart the game, `restart()` method is called which sets the score to zero and reinitializes the game. If the user wishes to leave the game instead of restarting, the highest score is displayed.
- g. `game.java`: This code contains the application of the project. When you run this code, a java message box appears showing you the control keys of the game. Then the game window appears where you can move the snake with the control keys.

Some images of the project:





This is the snake project.