Our group plans to recreate a version of the Snake game. This project falls under category C – Animation game. We will create a text based version of snake and a GUI version of snake.

**Summary of how snake works**

The player starts out with a pixel/dot in a border. The player will be able to move the snake within the border. There will be a piece of food that will spawn within the border and the snake will be able to eat it. If the snake manages to eat the food, the snake will grow one pixel/dot and another food will spawn at a random location. The challenge of this game is to get the snake to grow as long as possible while trying to avoid the snake from eating itself or colliding with the wall.

**User experience**

* The user should be able to move the snake with a set of keys. (W,A,S,D or the arrow keys)
* For the GUI version, the user should be able to start the game by pressing one of the movement keys. This will prevent the user being thrown into the snake game that is running right away. They should be able to press a key and then the game will start
* After the game has ended, the game should indicate “Game Over” and show the player’s score. The score will be based on how much food the player was able to get
* The game should include two modes: single player and two players mode.

**What we find on Demo1 and we did on Demo 2**

* We fixed a bug that the food may have the same position on the snake body.
* We transfer the text based version to a GUI version.
* Make more class instead of make all classes in one java file.

**Plan to do on Demo3**

* Add double player mode.
* Add more kind of food which can make different effects to snake.
* Maybe add a timer for challenger mode.
* Add picture to build a better snake and background.

**What we did on Demo3**

* Added single player mode and double players mode.
* Added a bonus food which can increase two units of snakebody and a position food which will decrease one unit of snakebody.
* Add score for accounting player’s score for determining the winner.
* Added picture for the snake, food and background.
* Fixed the bug that two snakes may not appear on the same position in double players mode.
* Made every single class in the project instead of building inner class
* Made the full text version of the game.

**What the final version should like**

* Have nice pictures of snake, food and background.
* May have adventure challenge mode.
* Have a nice start panel.
* Fixed all the bugs in the game.

**Final Version**

* We fixed the problem that the snake will die if the snake appear beside wall.
* We add player’s name for two players mode.
* Add challenge mode which can challenge double speed or triple speed.
* Add picture to the interface.
* Add countdown time, to make sure that you can find your snake before the game start.
* Make two different color snake.
* Add more Junit Test.

**Final project description**