1.0.0 The game is designed in a sample organized way that can be improved easily with the minimum changes in the base components which represented in the following classes:

1.1.0 GameManager: a singleton class responsible of managing the main game functions as starting the game, end game and it plays the role of communication layer between the other components.

1.1.1. Main Functions:
- **Initialize:** initialize the game components and reset the environment then begin the countdown.
- **StartGame:** starts the game and receive user input.
- **Clear:** destroy the snake, the fruit and the obstacles after the game finish.
- **Lose:** handles lose scenario and open "Game Over" menu.

1.2.0 FieldManager: a singleton class responsible of initializing and managing the field that the snake is moving on.

1.2.1 Main Functions:
- **Initialize:** reset the virtual grid that manage the playing field.
- **SetObstacle:** sets a given number of obstacles in random locations in the field.
- **SetSnakePosition:** sets the snake in a random empty place with a random direction.
- **CheckCollision:** check the snake collision with any object containing the snake itself in every move.
- **Clear:** destroys the obstacles.

1.3.0 FruitManager: a singleton class responsible of generating new random fruit in new random empty location in the grid.

1.3.1 Main Functions:
- **Initialize:** initializes the fruit manager variables.
- **PlaceFruit:** place a new fruit in a new random location.
- **Clear:** destroy the left fruit when lose.

1.4.0 Snake: a class that represents the snake object as it consists of an array of gameobjects represented in head, tail and a chain of units starts initially with one unit and increases with one unit when the snake eats fruit.

1.4.1 Main Functions:
- **Initialize:** initializes the snake in a random position with a random direction.
- **Update :** handles user input.
- **Move:** responsible of moving the snake according to user input , this function is being called constantly while the game is playing each 0.3 second.

2.0 Instructions:
- Control the snake moving direction using the arrows
- Don't cross the field boundaries
- Avoid hitting the obstacles
- Eat fruits as much as you can