

Design:

We've separated the code into multiple packages, collecting together the classes that handle the same things, e.g. GUI package includes the FXMLs and their controllers, resources package includes the XML files and the photos used in the game, and so on.

Starting at *MainMenuController* we have the main function that launches the game, after picking the level desired, the window changes to the *Game FXML* handled by *GameController*.

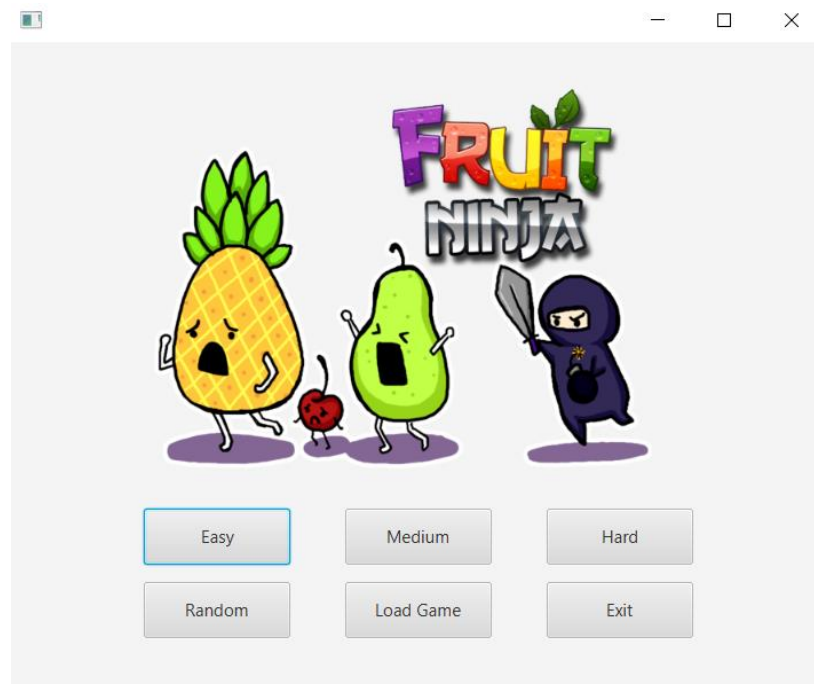
GameActions in *controller* package implements *IGameActions* interface. It has the following methods: *createGameObject*, *updateObjectsLocations*, *ResetGame*, setters and getters for *time*, *score*, and *Lives*, *SaveGame*, *LoadGame*, *checkFallingObjects*, *sliceObject* and a few others.

Design Patterns:

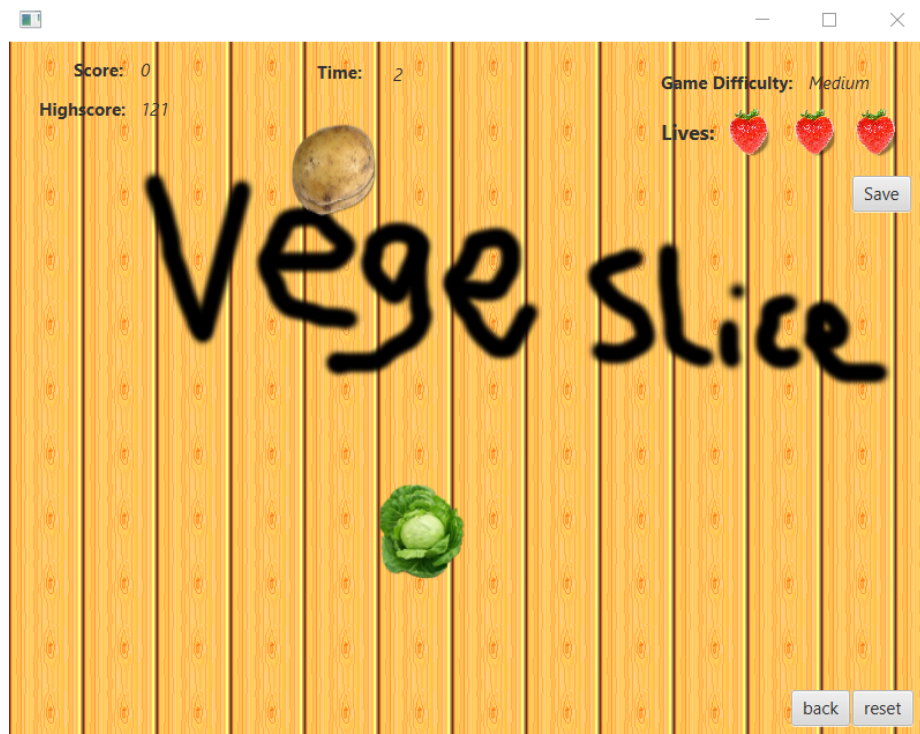
- **Command:** Used in the *GameActions* class for saving and loading
- **Memento:** Used in saving (game state is stored in a *SaveMemento* object which is passed to the receiver and used in the save method)
- **Factory:** Used to create *GameObjects*
- **Singleton:** Used in the *GameActions* class

Snapshots:

Main Menu:



GamePlay:



Game Over:



User Guide:

When starting the game you are presented with multiple level-options; easy medium, hard, or random. And other options; exit and load. Load reloads the last saved game if you have one.

Easy Mode: Low speed.

Medium Mode: Medium speed.

Hard Mode: High speed.

Arcade Mode: You have 60 seconds to play, no lives.

Random: Starts one of the levels randomly

After picking your preferred level, the game starts immediately; your objective is to slice the fruits and/or vegetables using press and hold on your left click of the mouse. Each fruit dropped without slicing makes you lose a life; you start the game with 3 lives. There are fatal bombs: the make you lose all lives, dangerous bombs: they make you lose one life, bonus peppers: the give you 5 extra points.

You can save at any time, then load later, the game loads with the last time, score, and lives saved. Your goal is to get the highest score possible.

Class Diagram:

