



# **CS 319 - Object Oriented Software Engineering**

## **Project Design Report Iteration 1**

**Katamino PC Game**

**Group 3C**

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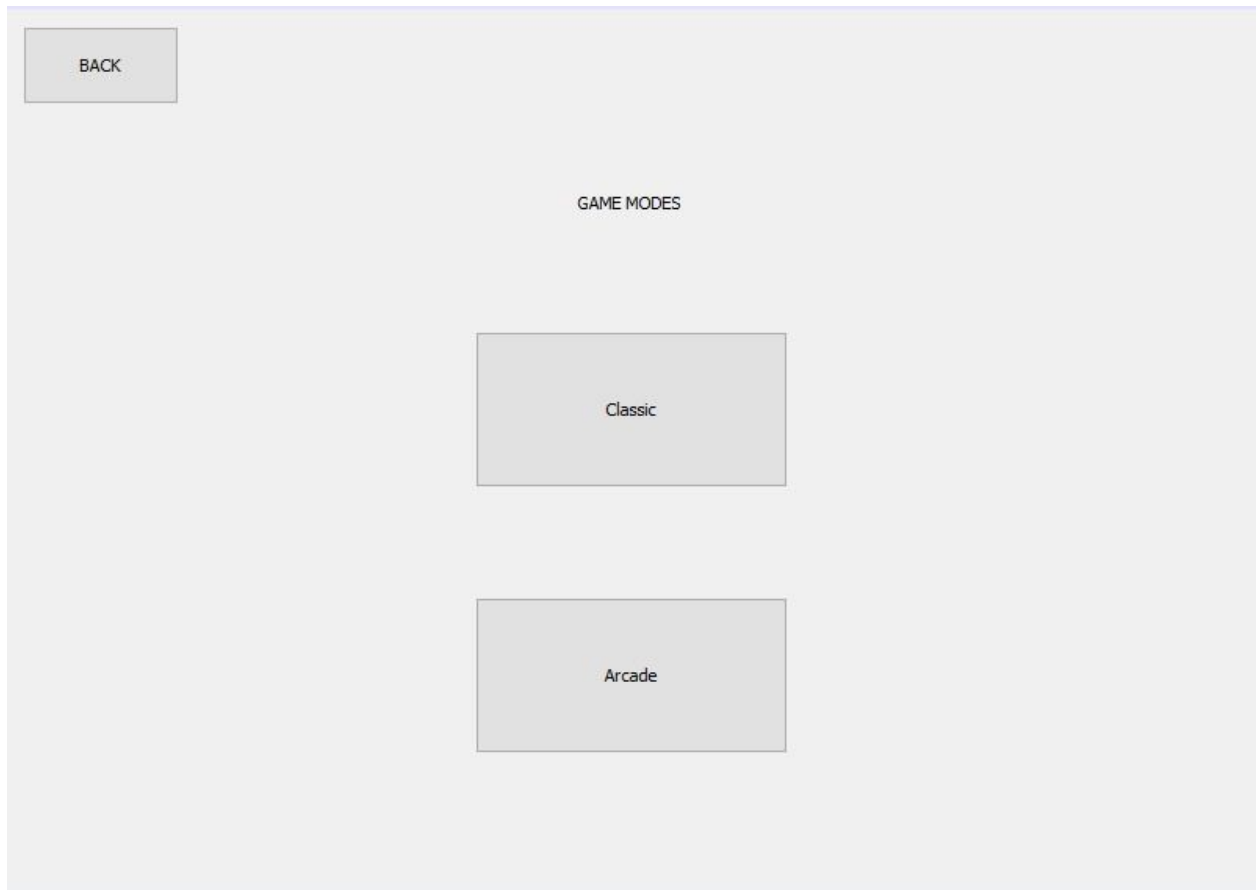
Can Savcı, 21300803

## 1. Implementation

After receiving the feedback from our design report we started implementing the project in accordance to the diagrams we designed before. We decided to implement our code in NetBeans coding environment. This IDE not only is user friendly it also has some features that will help us implement our code in an easier and quicker way by its “Drag and Drop” feature. After writing the code and making sure it works, we pushed the code to our GitHub page. In the first iteration Berk worked on the view classes, Sera worked on the user interface and menu classes and Murat worked on the controller class. Pegah and Can worked on designing the game board and the objects that will be used through the game.

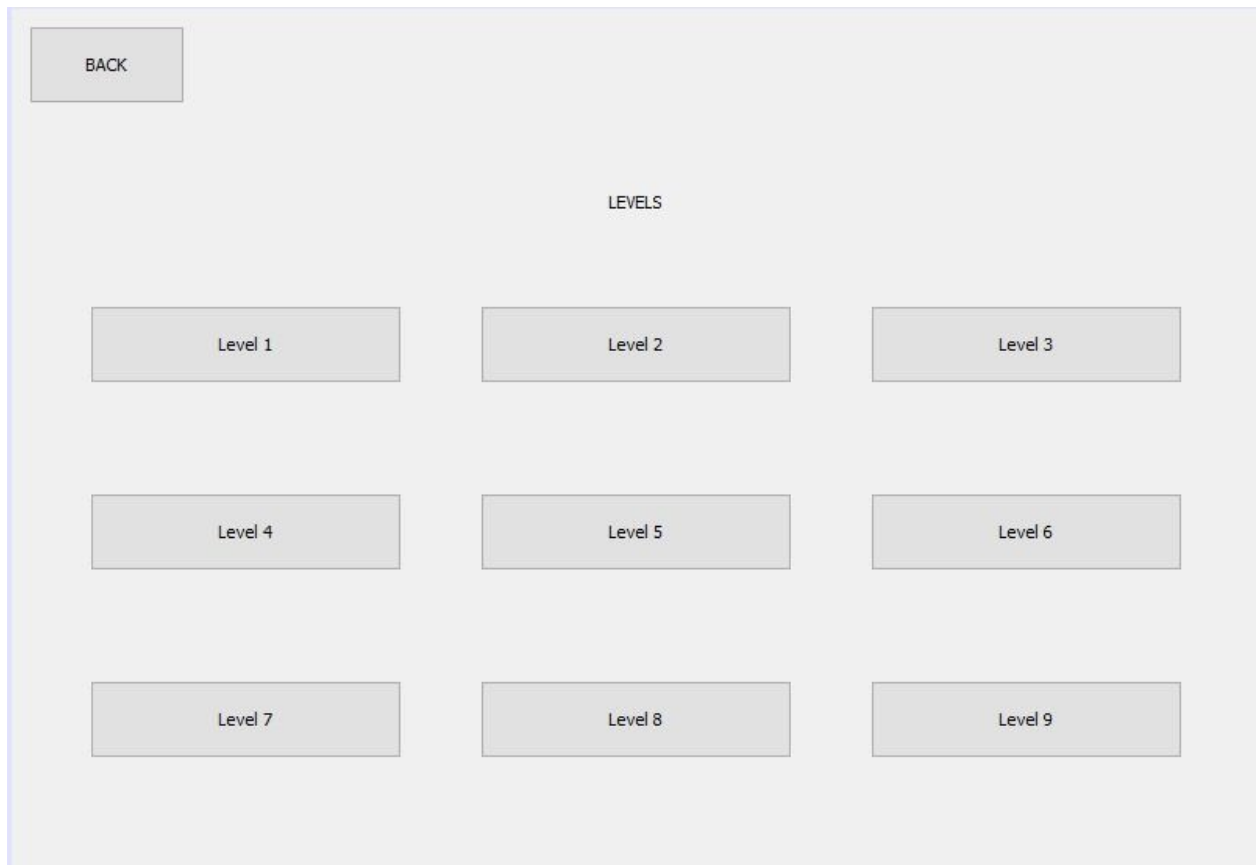
## 2. Game View Screen

So far, we managed to implement the game mode screen, in which the user will be able to choose a mode for the game that he or she wants to play. The user could also choose to go back to the main menu by clicking on the back button. The Game Mode screen is as follows:



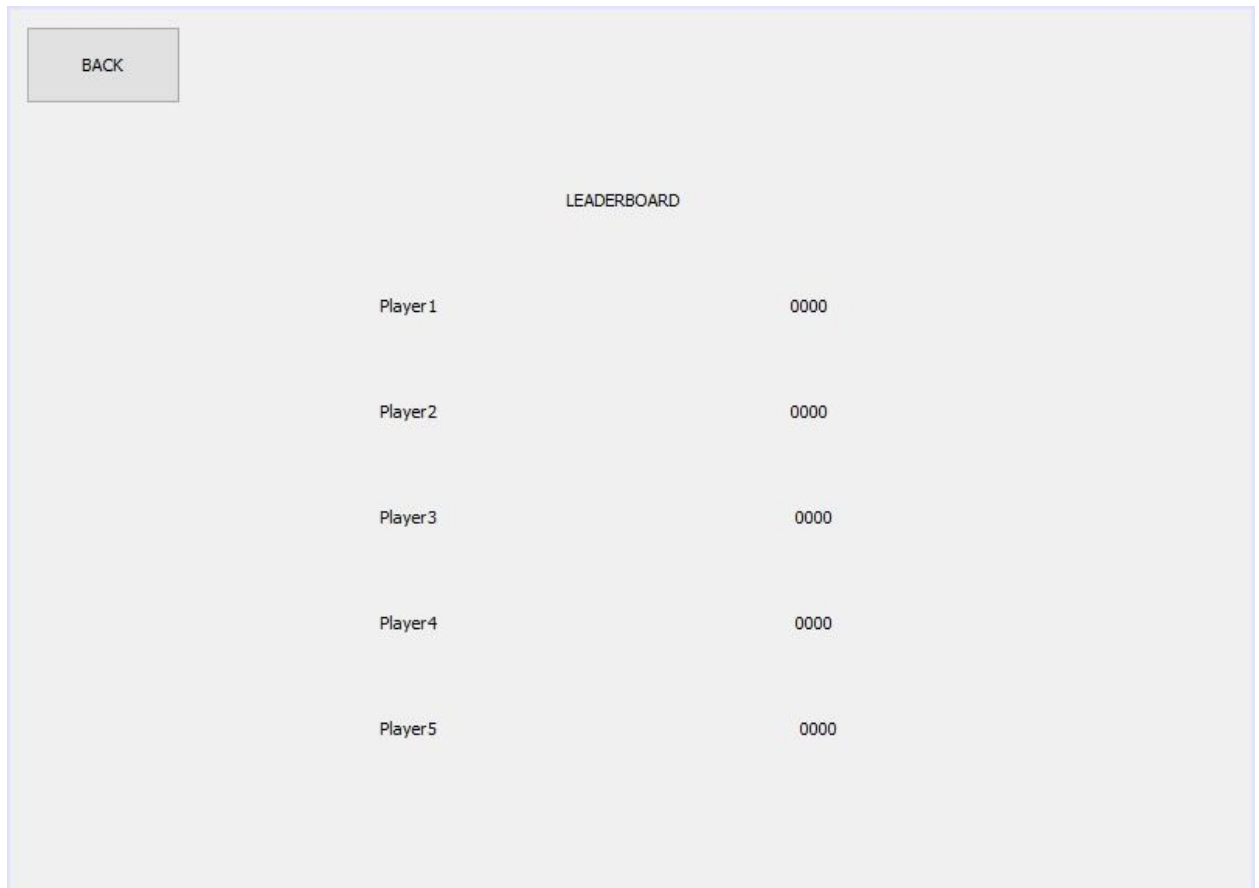
We also implemented the screen in which user can choose the level and view how many of them are there or left.

The Levels Screen is as follows:



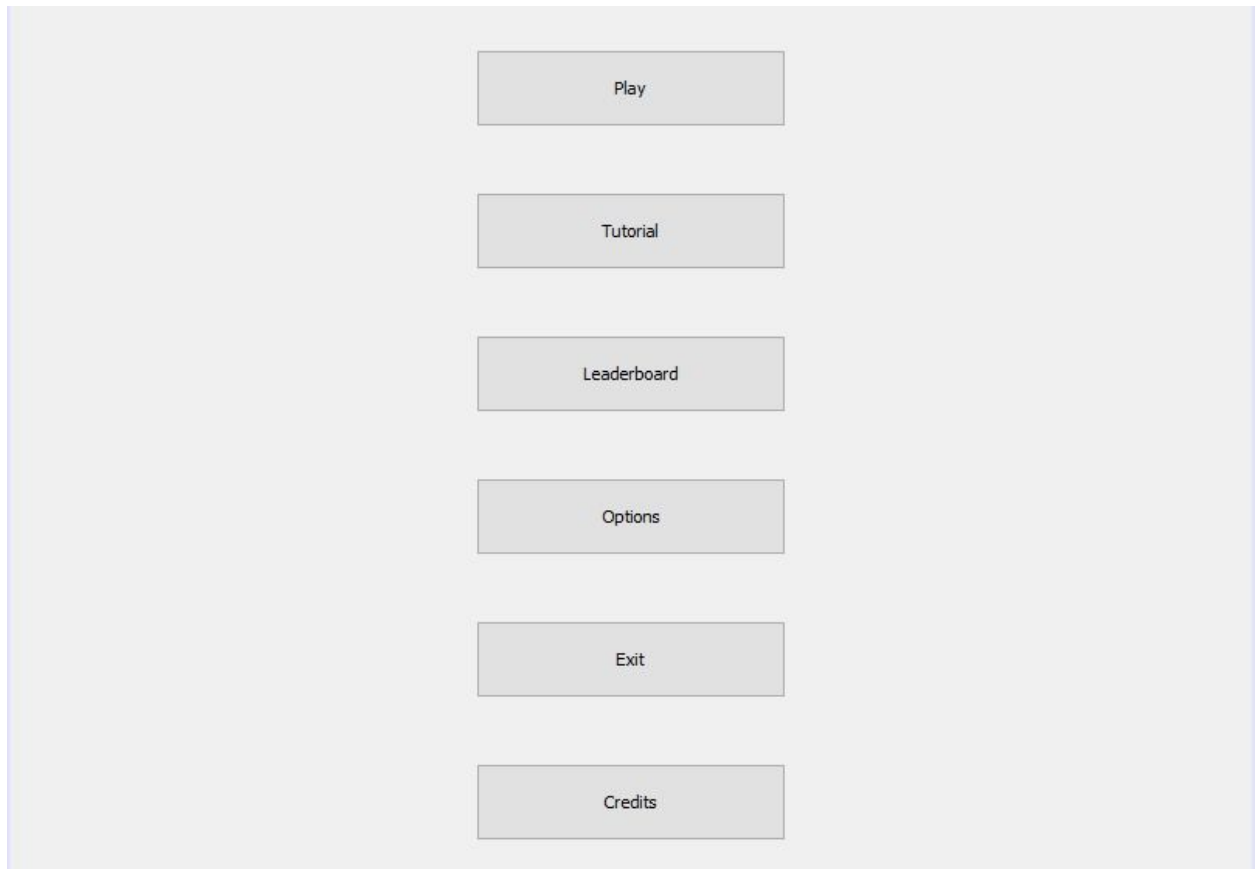
The following screen is designed to show the user the leaderboard information. In other words, user can click on the leaderboard button and see his or her rank among other players.

The Leaderboard screen is as follows:



Additionally, we implemented the view screen of the game in which the user can travel among different options starting from playing the game to exit, view the Leaderboard, Tutorial, Sound and Theme options to credits.

The Main Menu screen is as follows:



We also implemented the view screen of Options, when the user clicks on the Option button her or she is lead to the Option screen. In this screen the user will be able to control the sound and music of the game. The user will also be able to change the overall theme of the game in accordance to their field of interest.

BACK

OPTIONS

Sound

☐ ON

☒ OFF

Music

☒ ON

☐ OFF

Theme

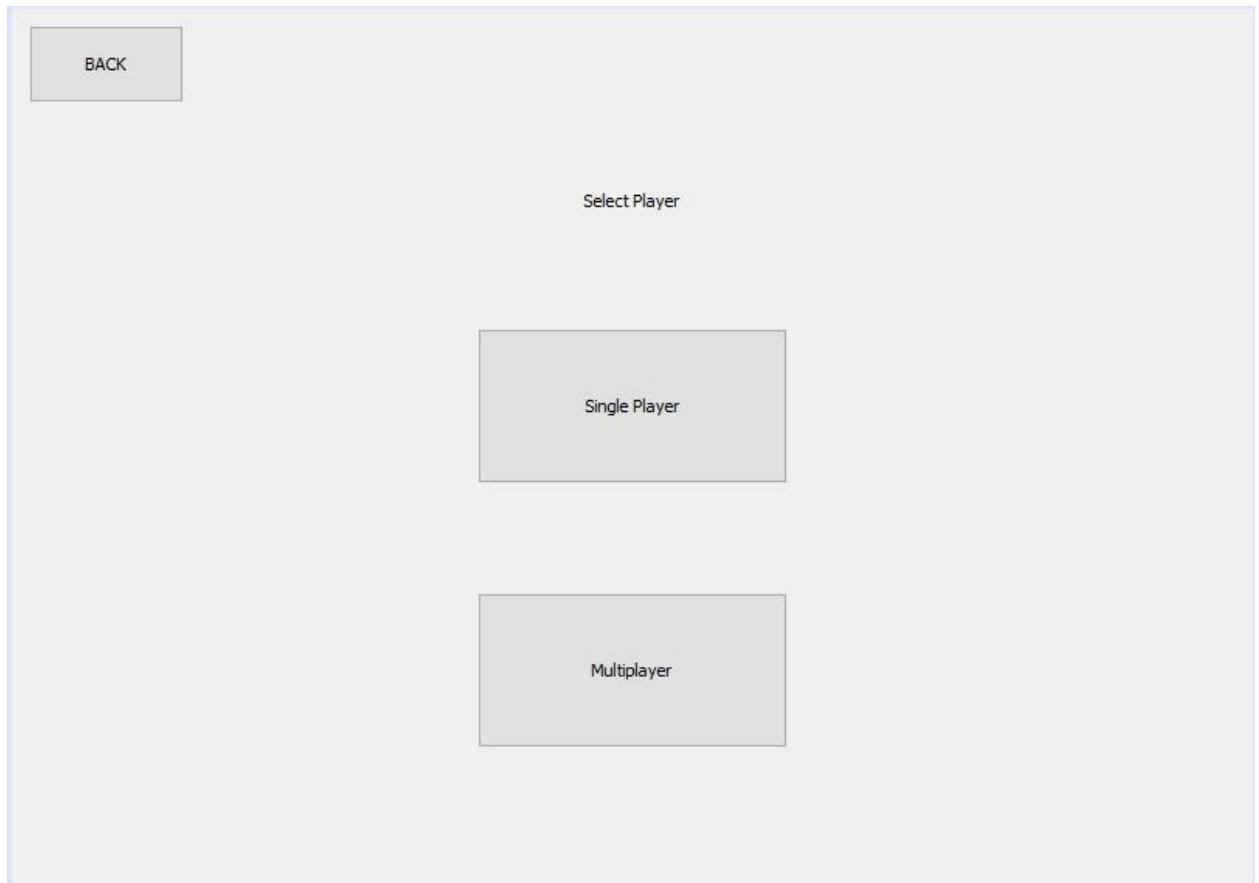
☒ ARCH

☐ CS

☐ MAN

☐ ME

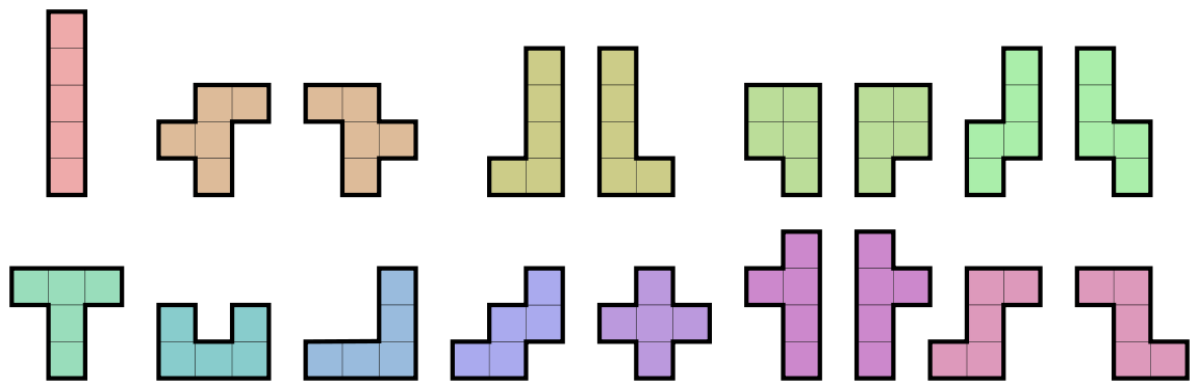
The following screen will provide the user with the opportunity to choose the game in either multiplayer or single player mode.



Our group is planning to add more visuals, graphics and colors to the view screens as we proceed in the implementation. This is a quick view of what we will have so far, more things will be added.

### **3. Game Objects**

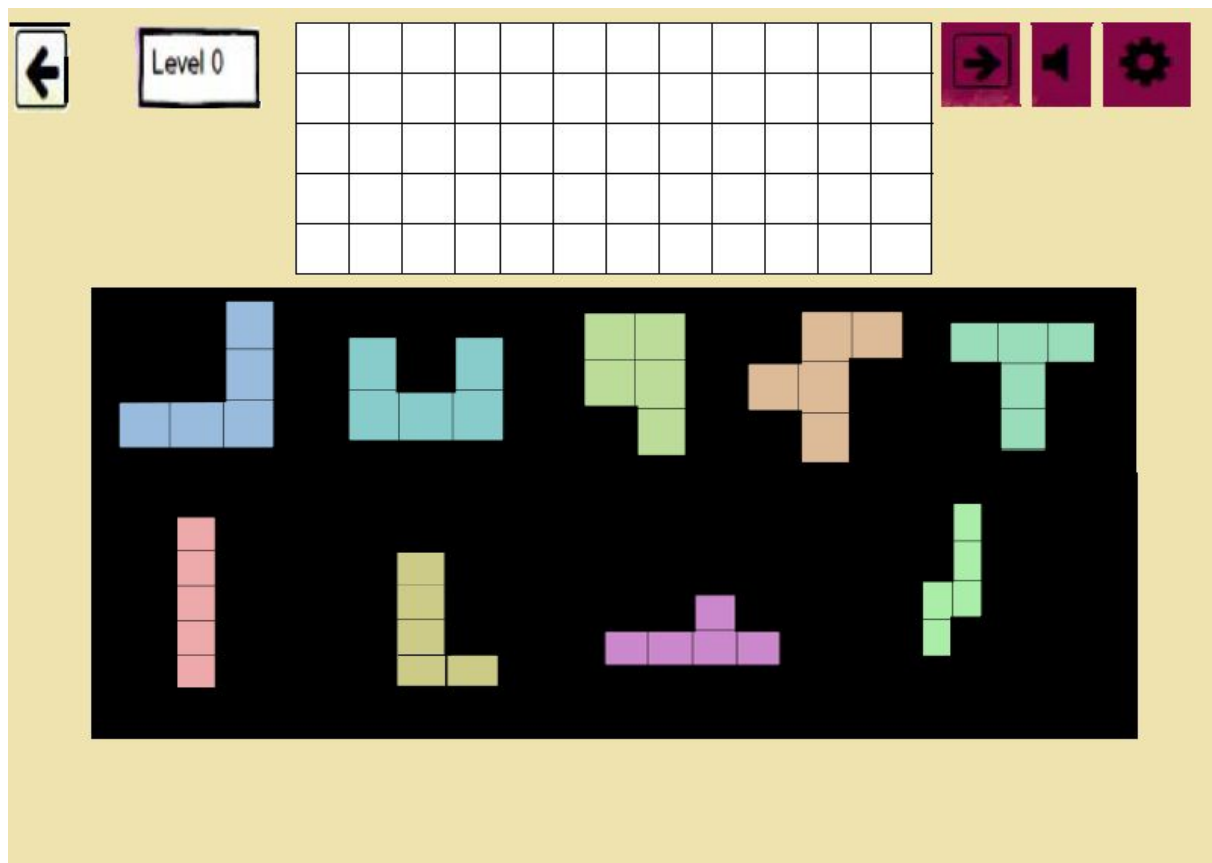
We managed to design our game objects which are basically the Pentomino pieces for filling the board and the board itself. Each object of Katamino is a different shape of Pentomino in which can be rotated and flipped. The following pictures are the Pentomino pieces we could make so far:



## 2. Game View

The game is shown as follows:





We designed a sample level and the anticipated view of the game. As it is shown in the image, the user will be provided with a board in which is accurately scaled according to the Pentomino dimensions. Depending on the level, in the box provided below the screen, the user will be provided with the Pentomino pieces in which he or she can drag and drop the piece on the board in any desired location. Depending on the mode of the game there will be a timer on top of the screen. Additionally, the user will be able to pause the game (only in Classic mode), control the sound, go to settings screen and jump to the next level in case the current level is already successfully done or the next level has already been unlocked. The back button is provided so the user can also visit the previous level.