

## Manual of Casual Gomoku:

This software program allows two users to play a game called Gomoku, which is also known as 5 in a row. When the program is started, a menu system is shown in the figure 1.

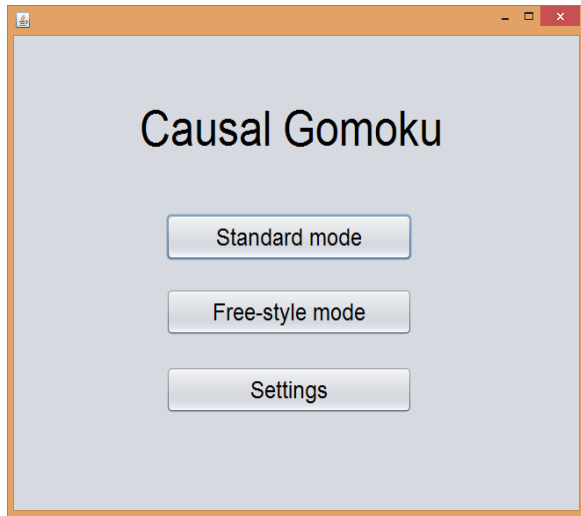


Figure 1: Main menu.

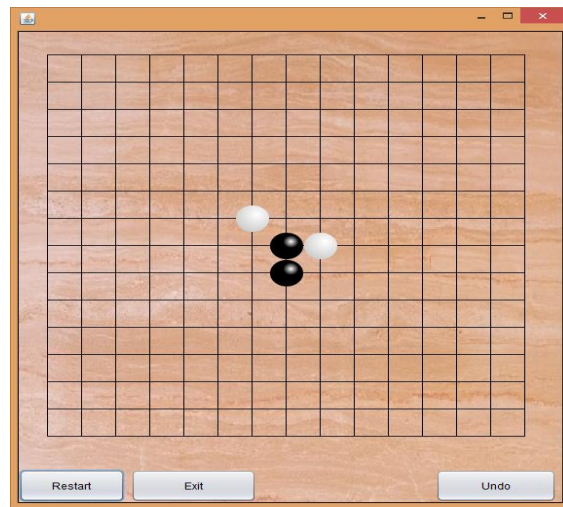


Figure 2: board frame

In the Main menu, there are three buttons. They are Standard mode, Free-style mode and Settings.

If the standard mode is chosen, a board frame will be displayed, which is shown in the Figure 2, and users could play the Gomoku by using mouse to click on the board. There are also three buttons provided for users. They are Restart button, Exit button and Undo button. Restart button allows users to restart the game. Exit button allows users to end the game and go back to the Main menu. Undo button allows users to retract a false move. When a user wins the game, a message will be shown on the screen indicating who the winner is.

If the Freestyle mode is chosen, a small menu will be displayed, which is shown the Figure 3, and users could choose the size of the board and the number of stones to win by using the slides. There are also two buttons provided for users to confirm the settings to start the game and to go back to the Main menu.

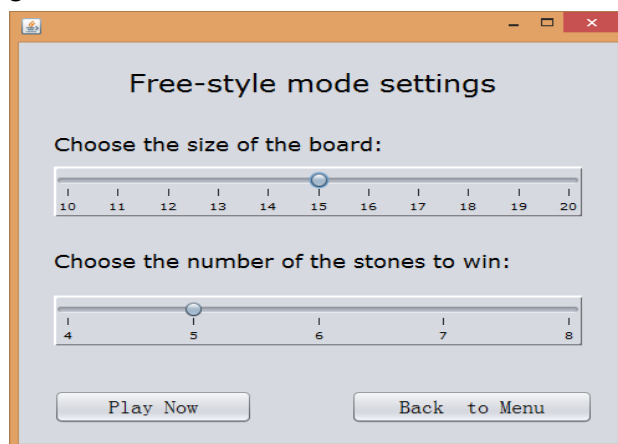


Figure 3: Freestyle mode menu

If the Settings button is pressed, a setting menu will be displayed and shown in the figure 4.

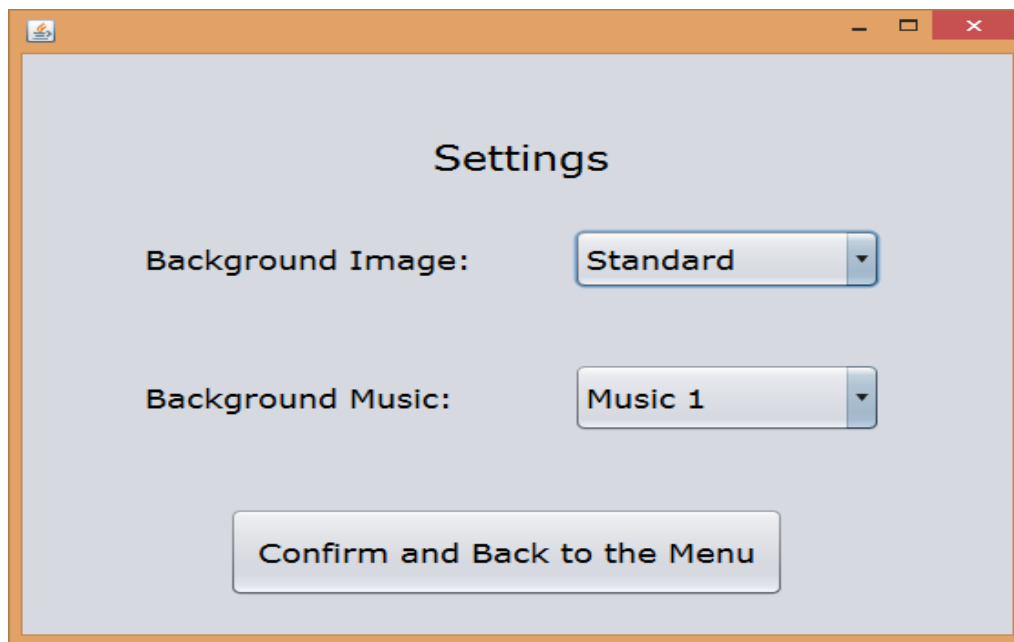


Figure 4: Setting menu

In this setting menu, users could choose the background image of the board and the background music of the board. There are three choices for users to choose the background image and three choices for users to choose the background music. Figure 6 and figure 7 shows the other two background image of this software program.

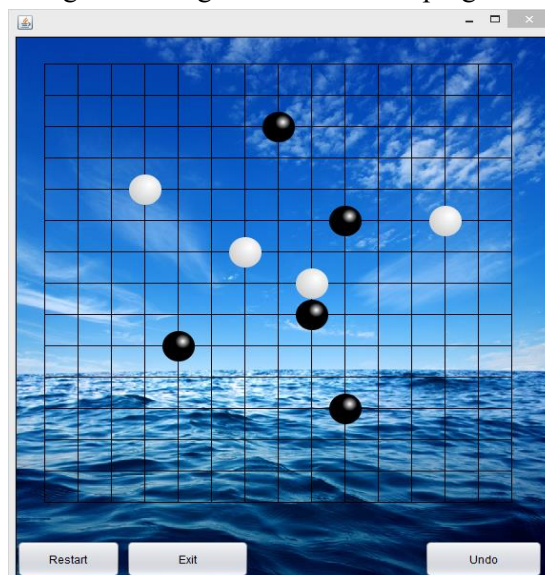


Figure 5: background image choice 2

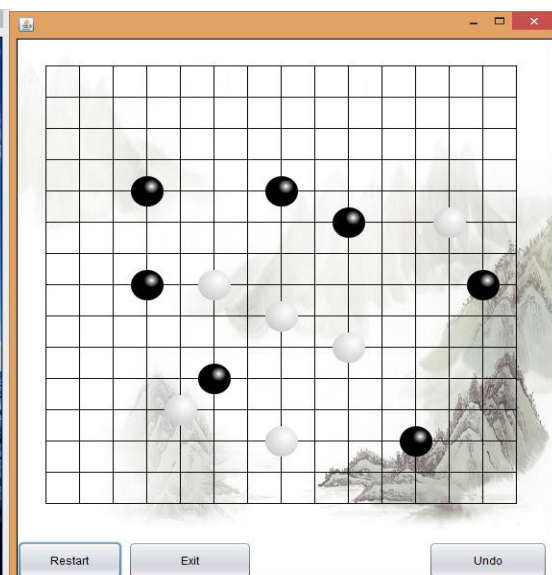


Figure 6: background image choice 3

In addition, a button is also provided for users to confirm the settings and go back to the Main menu.

## **Discussions and Features:**

### **Friendly Menu systems:**

This software program provides very friendly menu systems for users. This menu systems include buttons, slides and Comboxes. These causes that the menu systems are very easy for users to use.

### **Standard mode and freestyle mode:**

This game provides two mode for users to play the Gomoku game. They are standard mode and freestyle mode. Standard mode is the basic mode of the Gomoku game. In this mode, users need to obtain a row of five successive stones of his/her color vertically, horizontally or diagonally on the 15\*15 board. However, in the freestyle mode, users could choose the size of the board and choose the number of stones to win. This free style mode make the game more interesting and it also increases the difficulty of the game to some extent.

### **Stones of the board:**

The stones of the game are designed to be look like “Go” pieces rather than simple two-dimensional image of circle by using gradient painting. This gives users a better use experience.

### **Undo button:**

An Undo button is designed and provided for users to implement “go back” if the user want to withdraw the false move.

### **3 choices of background image:**

In addition to the traditionally standard “Go” board image, another two background images of the board are provided for users. These two images are “sea” and “wash paintings”. This means there are three background images for users to choose in the Setting menu.

### **3 choices of background music:**

There are three choices of background music provided for users to choose. Users could also turn off the music in the Setting menu.

Compared with the plan, all the original design goals were met. In addition, the code structure were well-organized and the algorithms used in the game were optimized. The designed data structure of the stones were smart. All designed classes and data structures can be reused in the future update.