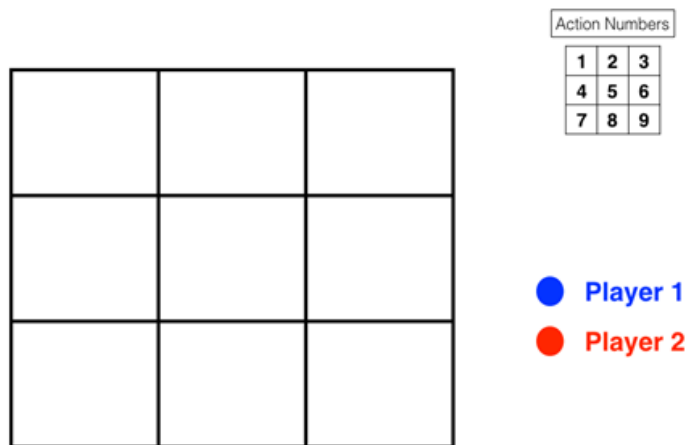


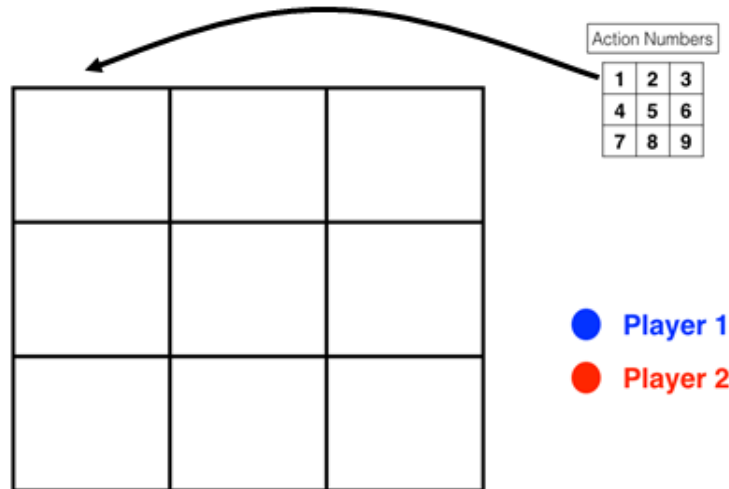
CS101 Homework 2: Tic Tac Toe Game

Deadline March 18, 2016 Friday 23:55 p.m.

In this homework, you will implement Tic Tac Toe game. You will use your first homework for the graphical interface.

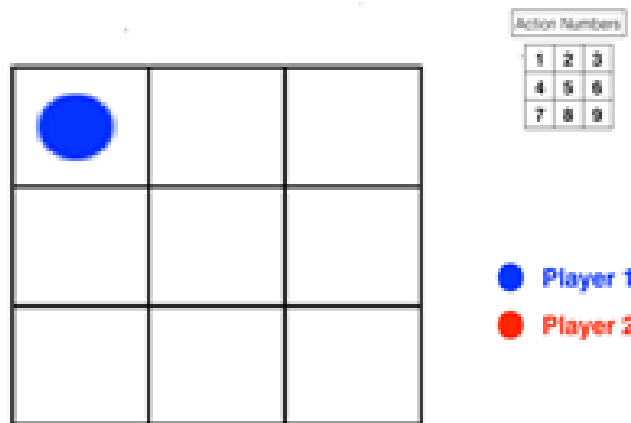


The small grid at the upper right corner will display numerical labels denoting the corresponding square in the main grid. For instance, the label 1 denotes the top leftmost square. The interface will also display each player's icon in different color (e.g., blue oval shape with a "Player 1" label as seen in the interface). It is important to use loop statements in this homework.



Your program will ask each player in turn to enter a valid action number, which is between 1 and 9. Your program will check if the given action number is valid. An action number between 1 and 9 is valid if the corresponding square in the main grid is empty ! That is, none of the players has put their mark on the specified square, yet. If the current player does not enter a valid number, the program will warn the user and ask again for a valid number till the player enters a valid action number.

When the current player enters a valid action number, the program will draw the player's mark on the corresponding square (blue oval for player 1 and red oval for player 2). Afterwards, it will continue with the other player. This procedure will continue till the game ends according to the rules.



When the player 1 enters “1”

Please check the rules of this game from the following Web site:

- http://www.exploratorium.edu/brain_explorer/tictactoe.html

Remarks:

1. If the action number entered by the user is not between 1 and 9, your program will print a warning message such as “The action number should be between 1 and 9”
2. If the square specified by a given action number is already occupied, your program will print a warning message such as “That square is already marked! Please choose another action number”.
3. In both case above, your program will ask the player to enter another action number until the action number specified by the player is valid.
4. The players have to take action in turn. That is, the player 1 will start the game and then player 2 and so on. Any player cannot play twice in the same round.
5. If one of the players wins the game, your program will print “Congratulations, you won the game”.
6. If all of the square is marked but none of the players wins the game, your program will print “The game is over. Nobody won the game :(”

Coding Instructions:

Submit a file named **TicTacToe.java** to the LMS **submissions with different names will be disregarded!**

Make sure your program **compiles and runs before submitting otherwise you will get 0 from your homework (no exceptions).**

The first lines of your code must include your name, surname, student number, and department as a comment. An example comment is as follows:

```
/* John Smith S0001 Department of Computer Science */
```

Submit .java files only. Do NOT submit .rar, .zip, .doc, .class, etc. files.

IMPORTANT : Add comments to your code that briefly explains what your code does such as :

```
int n; // n holds the number of square  
if ( n > 0) // test whether the value of n is greater than zero
```

Warning: You will continue working on this assignment; therefore write neat and clean code (e.g. meaningful variable names, indentation).