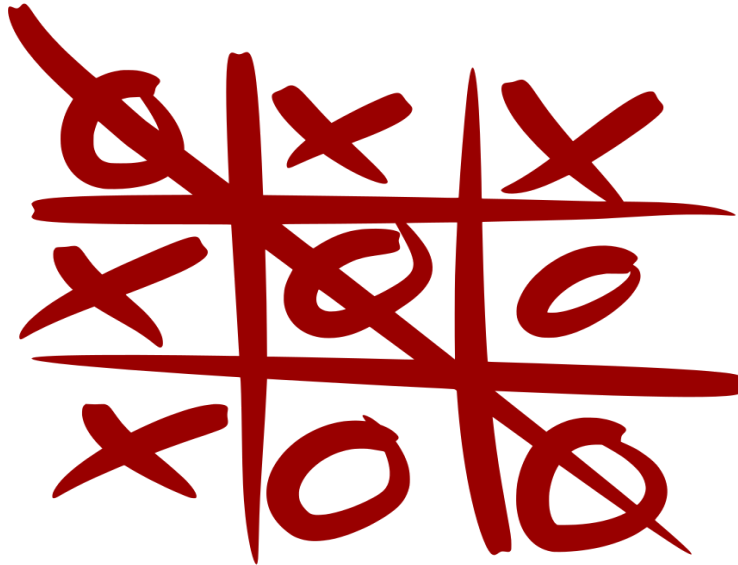


First Step - Tic Tac Toe (X - O) Project Requirements

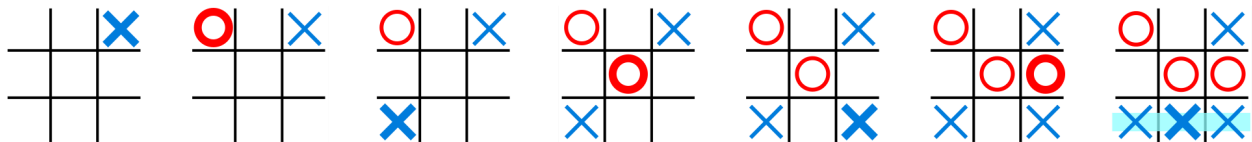
First, We start implementing multiplayer Tic-Tac-Toe game in C.



Basic Definition

Game's board consists of 3 rows by 3 columns, all the cells in the board are initially empty. The players alternate the moves until there's a win or draw. The player who succeeds in placing three of their marks in a horizontal, vertical, or diagonal row is the winner.

Here is an example of X winning by successfully placing 3 X's in the 3rd row using 7 moves.

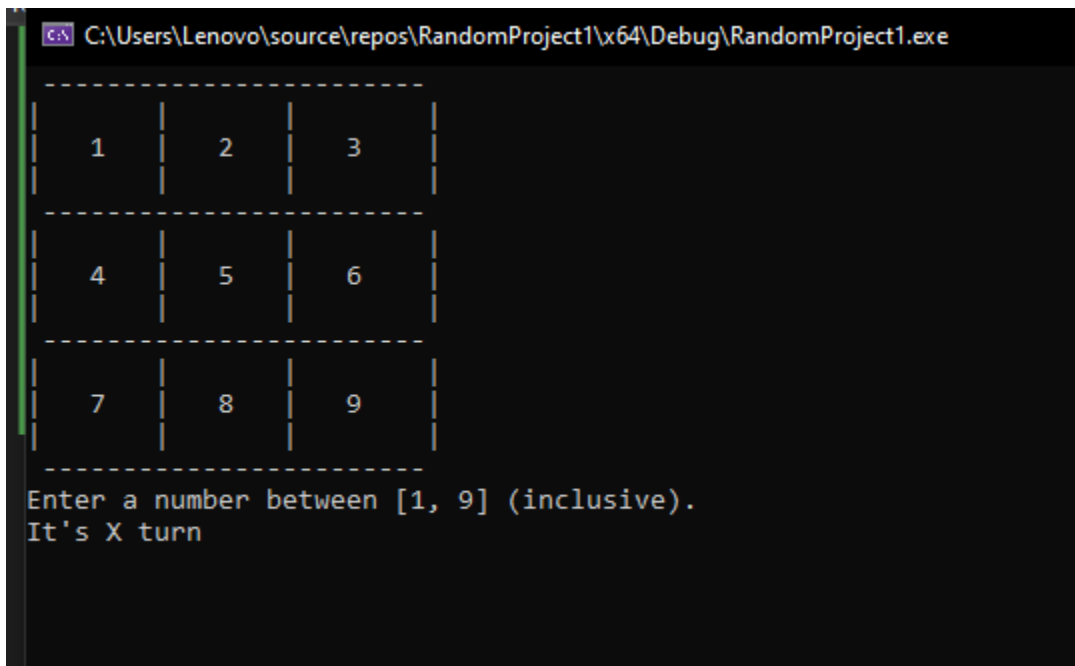


Game flow

1. The board should be printed to the console/screen.
2. Ask the user for cell position (valid cell positions are numbered from 1 to 9 inclusive) and replace the empty cell with the user character (X or O).

3. The player can't play in the same position more than once.
4. If the user entered an invalid position i.e. cell number outside the board or already marked, print "Invalid input".
5. After any move, you should update the board and print it to the console/screen.
6. Your program should print who will play the current move (X or O).
7. If a player wins after any move, you should print the winner with his symbol.
8. If the board is filled over without any winners, you should print "draw".
9. After the game ends, you should ask the user whether they want to start a new game or not.

Interactions



```
C:\Users\Lenovo\source\repos\RandomProject1\x64\Debug\RandomProject1.exe

  |  |  |
--|--|--
 1 | 2 | 3
  |  |  |
--|--|--
 4 | 5 | 6
  |  |  |
--|--|--
 7 | 8 | 9
  |  |  |
--|--|--

Enter a number between [1, 9] (inclusive).
It's X turn
```

```
91 |-----|
92 |
93 |Enter a number between [1, 9] (inclusive).
94 |It's X turn
95 |1
   |-----|
   | X | 2 | 3 |
   |-----|
   | 4 | 5 | 6 |
   |-----|
   | 7 | 8 | 9 |
   |-----|
t .....
output Enter a number between [1, 9] (inclusive).
        It's O turn
```

```
95 |1
   |-----|
   | X | 2 | 3 |
   |-----|
   | 4 | 5 | 6 |
   |-----|
   | 7 | 8 | 9 |
   |-----|
t .....
output Enter a number between [1, 9] (inclusive).
        It's O turn
10
Invalid choice
```

Enter a number between [1, 9] (inclusive).

It's 0 turn

8

X	O	X
O	O	X
X	O	9

0 wins the game.Do you want to play another game?

Enter 0 to exit, 1 to continue

X	O	X
O	O	X
X	O	9

0 wins the game.Do you want to play another game?

Enter 0 to exit, 1 to continue

1

1	2	3
4	5	6
7	8	9

Enter a number between [1, 9] (inclusive).

It's X turn

```
Enter a number between [1, 9] (inclusive).
It's X turn
-----
|  X  |  O  |  X  |
|-----|
|  X  |  O  |  O  |
|-----|
|  O  |  X  |  X  |
|-----|
drawDo you want to play another game?
Enter 0 to exit, 1 to continue
```

Grading

- Clear naming of variables and functions (10 marks)
- Handling invalid inputs (20 marks)
- Handling game over (win or draw) (20 marks)
- Coding format (10 marks)
- Updating the board after each play (20 marks)
- Useful interactions with the user (10 marks)
- Code (maintainability - readability) (10 marks)