Tic Tac Toe Game

```
int main ()
{
TicTacToe game;
int gameStatus;
char mark;
game.player = 1;  initialized by 1

do {
game.displayBoard ();  →
```

1	2	3
4	5	6
7	8	9

```
game.player = (game.player %2) ? 1 : 2;
         = (1 %2) ? 1 : 2
         = (1) ? 1 : 2    → true
         = 1
```

player 1 will play

```
cin >> game.choice  —— Takes input from user.
mark = (game.player == 1) ? 'x' : 'o';
     = (1 == 1) ? 'x' : 'o'
     = 'x'  — player 1 will be assigned with
             'x'

game.markBoard (mark);
```
Through this function it will mark on the displayboard according to the choice of player 1 but before it will check condition

```
if ((choice >=1 && choice <= 9 && (square[choice]
== 'x' || square[choice] == 'o')) || (choice <1
|| choice > 9))
```

if player 1 enter = 12 — this is greater
than 9 then this
will show invalid
move

else if player 1 enter = 1 — again check for cond⁰
weather at position 1,
there is already 'x' or 'o' — false

```
else
Square[choice] = mark  — for player
                           1 is x
'x' will store in place of square [1]
```

__Next__

check for Game status by
checkforwin() function

x	2	3
4	5	6
7	8	9

```
1) [1] = [2] = [3]        4) [1] = [4] = [7]
2) [4] = [5] = [6]        5) [2] = [5] = [8]
3) [7] = [8] = [9]        6) [3] = [6] = [9]
     7) [1] = [5] = [9]  → If any one from this
     8) [3] = [5] = [7]     cond⁰ is true then it
                            will return 1

else if [1] != [1] & [2] != [2] ........ [9] != [9] — In
this cond⁰ it will return 0 — means Game Draw

else Return = -1  — While loop (means again
                          do loop will executes
```
This
condition is
true in not case

Again do loop will execute and player ++

```
2)   player = 2
     player = (2 %2) ? 1 : 2;
     player = 2  and  choice = 5
     mark = (2 == 1) ? 'x' : 'o';  — condition is false
     mark = 'o',  markBoard func⁰ ()
     check for win condition —— -1
     player = increment.
```

x	2	3
4	0	6
7	8	9

```
3)   player = 3
         = (3 %2) ? 1 : 2;
         = 1
     choice = 4   mark = 'x'
     markBoard func⁰ (); — ∵ else block
     check for win condition —— -1
     ++player
```

x	2	3
x	0	6
7	8	9

4) player = 4
   = (4%2) ?1 : 2
   = 2
   choice = 4   mark = 'o'
   markBoard funct'n () = else Block
   check for Win () = -1
   ++ player

X	2	3
X	o	6
o	8	9

5) player = 5 = 1
   choice = 3   mark = 'x';
   mark Board () = else Block
   check for Win () = -1
   ++ player

X	2	X
X	o	6
o	8	9

6) player = 6 = 2
   choice = 2   mark = 'o';
   mark Board () = else Block
   check for Win () = -1
   ++ player

X	o	X
X	o	6
o	8	9

7) player = 7 = 1
   choice = 8   mark = 'x';
   mark Board () = else Block
   check for Win () = -1
   ++ player

X	o	X
X	o	6
o	X	9

8) player = 8 = 2
   choice = 6   mark = 'o';
   mark Board () = else Block
   check for Win () = -1
   ++ player

X	o	X
X	o	o
o	X	9

9) player = 9 = 1
   choice = 6   mark = 'x';
   markBoard () = else Block
   checkWin () = 0
   gameStatus = Game Draw

X	o	X
X	o	o
o	X	X