

Tic Tac Toe game (compiler Mind)

Aniket Sonawane.

CLASSMATE

Date _____

Page _____

```
int main ()
```

```
{
```

```
    n = 0;
```

```
    drawBoard ();
```

```
    while (1)
```

```
    {
```

```
        n++
```

```
        Input ();
```

```
        drawBoard ();
```

```
        if (checkForWin () == 'X')
```

```
        {
```

```
            cout << "X wins!" << endl; break;
```

```
        }
```

```
        elseif (checkForWin () == 'O')
```

```
        {
```

```
            cout << "Y wins!" << endl;
```

```
            break;
```

```
        }
```

```
        elseif (checkForWin () == '/' && n == 9)
```

```
        {
```

```
            cout << "Its a Draw Match \n";
```

```
            break;
```

```
        }
```

Main

```
n = 0;
```

```
drawBoard ()
```

→ counter to check players play the game.

calling drawBoard ()


```
//drawboard () //
```

```
** My tic tac toe **
```

```
1 | 2 | 3 |
```

```
4 | 5 | 6 |
```

```
7 | 8 | 9 |
```



output for drawboard () function.

```
void draw board ()
```

```
{
```

```
system ("cls")
```

```
cout << "** My tic tac toe game ** \n";
```

```
for (int i = 0; i < 3; i++)
```

```
{
```

```
for (int j = 0; j < 3; j++)
```

```
{
```

```
cout << matrix[i][j] << " | ";
```

```
}
```

```
cout << "\n";
```

```
}
```

i=0 ✓	j=1 ✓
0<3 ✓	1<3 ✓
j=0 ✓	j=2 ✓
0<3 ✓	2<3 ✓

i	0	1	2
j	0	1	2

i++

```
cout << matrix[0][0] << " | ";
```

```
[0][0] = 1
```

1 |

```
cout << matrix[0][1] << " | ";
```

```
[0][1] = 2
```

1 | 2 |

```
cout << matrix[0][2] << " | ";
```

```
[0][2] = 3
```

1 | 2 | 3

$i=0$ $2 < 3$ $i++$
 $j=0$ $3 < 3 \times$
 $0 < 3 \checkmark$
 $1 < 3$
 $j++$
 Δ
 $\{$
 $\cdot \}$
 $\text{cout} << "\backslash n";$

when $i=1$ $j=1$ $i \neq 4$
 $i < 3 \checkmark$ $1 < 3 \checkmark$
 $j=0$ $j=2$
 $0 < 3 \checkmark$ $2 < 3 \checkmark$ $0 \ 1 \ 2$

$\text{cout} << \text{matrix}[1][0] << " \ 1";$

$[1][0] = 4$

1	2	3
4	5	

$\text{cout} << \text{matrix}[1][1] << " \ 1";$

$[1][1] = 5$

1	2	3
4	5	

$\text{cout} << \text{matrix}[1][2] << " \ 1";$

1	2	3
4	5	6

$[1][2] = 6$

$j=3$

$3 < 3 \times$

out of loop $\backslash n$

$i = 2$ $2 < 3 \checkmark$ $j = 2$
 $j = 0 \leftarrow$ $j = 1$ $2 < 3 \checkmark$
 $0 < 3 \checkmark$ $1 < 3 \checkmark$

0 1 2

0 1 2

`cout << Matrix[2][0] << " |";`
 $[2][0] = 7$

1	2	3
4	5	6
7		

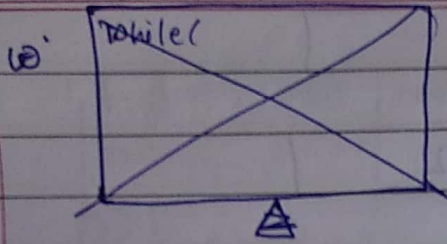
$i = 2$ $j = 1$ `cout << "Matrix [2][1] << " |";`
 $[2][1] = 8$

1	2	3
4	5	6
7	8	

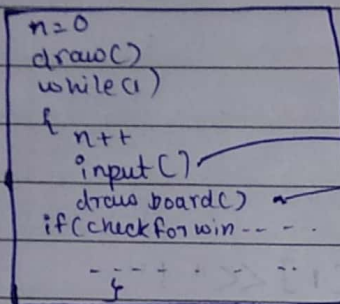
$i = 2$ $j = 2$ `cout << "Matrix [2][2] << " |";`
 $[2][2] = 9$

1	2	3
4	5	6
7	8	9

Full drawboard()



main



calling Input fn

Input()

void Input()

{

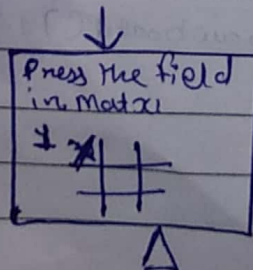
int a;

cout << "Press the Number of matrix field \n";

cin >> a;

if [a == 1]

matrix[0][0] = player



after input

calling draw board.

Simillary for all the values for all the input fields. till matrix

[a == 9]

matrix[2][2] = player.

check for win ()

```
if (checkforwin() == 'X') ←
```

```
return 'X';
```

```
{
```

```
cout << "Player 1 wins\n";
```

```
break;
```

```
if (checkforwin() == 'O')
```

```
{ cout << "Player 2 wins\n";
```

```
break;
```

```
elseif (checkforwin() == '.' &&
```

```
n == 9)
```

```
cout << "Match draw";
```

```
main check for win
```

cout

eg 1

```
→ check for win ( )
```

```
{
```

```
if (matrix[0][0] == 'X'
```

```
&& matrix[0][1] == 'X' &&
```

```
matrix[0][2] == 'X')
```

```
return 'X';
```

return of 'x'

0 0 0 1 0 2

X | X | X ✓

X | 0 | 0

0 | X | X

✓

"Player 1 wins"

Δ

Similar for player 2 i.e 0.
lly for 'O'

TogglePlayer()

{

if (player == 'x')

play = 'o'

else player = 'x';

player = 'x'

then player = 'o'

else player = 'x'

{ x } → first x
{ o } → then o.

x	o	o
x	x	o
o	x	o

field 1 = player 1 = x

field 2 = player 2 = o

output - Player '2' wins.

1	2	3
4	5	6
7	8	9
Enter the field in Mat		

1

x	1	1
1	1	1
1	1	1

"E" Because Player = 'x'

enter the field in matrix '2'

x 0 3
4 5 6
7 8 9
Enter - - - - -

'5'

x 0 3
4 x x
0 0 0 ✓
'0' wins!

Δ

'0' wins because

x 0 3
4 x 6
7 8 9
Enter - - - - -

'9'

checkforwin()

elseif(matrix[2][0] == '0' &&

matrix[2][1] == '0' && matrix[2][2]

== '0')

return '0';

x 0 3
4 x 5
7 8 0
Enter - - - - -

'8'

'5'

if(checkforwin() == '0')

cout << "0" wins << endl;

int main()

x 0 3
4 x 5
7 0 0
Enter - - - - -

'5'

x 0 3
4 x x
7 0 0
Enter - - - - -

Matrix

'7'

Output for draw.

X	1	0	1	X
X	1	0	1	0
0	1	X	1	X

$n = 9$

0	1	0	1	X
0	1	0	1	0
0	1	0	1	0
...

→ returns { '1' } value.

if (check for win (C) == '1' && n == 9) {
 cout << "Match is draw" << endl; }
 }

1	0	1	0	X
1	0	1	0	0
1	0	1	0	0
...

1	0	1	0	X
1	0	1	0	0
1	0	1	0	0
...

1	0	1	0	X
1	0	1	0	0
1	0	1	0	0
...