

Tic Tac Toe

Code:

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    cout << "Welcome to the Tic Tac Toe game." << endl;
```

```
    cout << "Please make sure that palyer 1's element is x and player 2's element  
is o." << endl;
```

```
    char array[3][3];
```

```
    char x;
```

```
    char o;
```

```
    array[0][0] = '-';
```

```
    array[0][1] = '-';
```

```
    array[0][2] = '-';
```

```
    array[1][0] = '-';
```

```
    array[1][1] = '-';
```

```
    array[1][2] = '-';
```

```
    array[2][0] = '-';
```

```
    array[2][1] = '-';
```

```
    array[2][2] = '-';
```

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

```
    {
```

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

```

{
    cout << array[k][l] ;
    if(l == 0 || l == 1)
    {
        cout << " | " ;
    }
    else
    {
        continue;
    }
}
cout << endl;
if(k == 0 || k == 1)
{
    cout << "--- ----- ---" ;
}
else
{
    continue;
}
cout << endl;
}

```

```

for(int i=0 ; i<9 ; i++)
{
    if(i % 2 == 0)
    {

```

```

int a, b;

cout << "Its Palyer 1's turn. Please enter the row number and column
number respectively:" << endl;

cin >> a;
cin >> b;

if(a<0 || a>2 || b<0 || b>2)
{
    cout << "Invalid Input. Please enter the valid one." << endl;
    i--;
}
else
{
    if(array[a][b] == 'x' || array[a][b] == 'o')
    {
        cout << "This cell is already occupied, please enter different inputs."
<< endl;
        i--;
    }
    else
    {
        array[a][b] = 'x';
        for(int m=0 ; m<3 ; m++)
        {
            for(int n=0 ; n<3 ; n++)
            {
                cout << array[m][n] ;
                if(n == 0 || n == 1)
                {

```

```

        cout << " | " ;
    }
    else
    {
        continue;
    }
}
cout << endl;
if(m == 0 || m == 1)
{
    cout << "--- -----" ;
}
else
{
    continue;
}
cout << endl;
}

}

}

else
{
    int c, d;

    cout << "Its Palyer 2's turn. Please enter the row number and column
number respectively:" << endl;
    cin >> c;

```

```

    cin >> d;
    if(c < 0 || c > 2 || d < 0 || d > 2)
    {
        cout << "Invalid Input. Please enter the valid one." << endl;
        i--;
    }
    else
    {
        if(array[c][d] == 'x' || array[c][d] == 'o')
        {
            cout << "This cell is already occupied, please enter different inputs."
<< endl;
            i--;
        }
        else
        {
            array[c][d] = 'o';
            for(int p=0 ; p<3 ; p++)
            {
                for(int q=0 ; q<3 ; q++)
                {
                    cout << array[p][q] ;
                    if(q == 0 || q == 1)
                    {
                        cout << " | " ;
                    }
                    else
                    {

```

```

        continue;
    }
}
cout << endl;
if(p == 0 || p == 1)
{
    cout << "--- -----" ;
}
else
{
    continue;
}
cout << endl;
}
}

}
}

```

```

if((array[0][0] == 'x' && array[0][1] == 'x' && array[0][2] == 'x') ||
(array[1][0] == 'x' && array[1][1] == 'x' && array[1][2] == 'x') || (array[2][0]
== 'x' && array[2][1] == 'x' && array[2][2] == 'x') || (array[0][0] == 'x' &&
array[1][0] == 'x' && array[2][0] == 'x') || (array[0][1] == 'x' && array[1][1] ==
'x' && array[2][1] == 'x') || (array[0][2] == 'x' && array[1][2] == 'x' &&
array[2][2] == 'x') || (array[0][0] == 'x' && array[1][1] == 'x' && array[2][2] ==
'x') || (array[0][2] == 'x' && array[1][1] == 'x' && array[2][0] == 'x'))

```

```

{
    cout << "!! Congrulations !!" << endl;
    cout << "Player 1 has won" << endl;
    break;
}

```

```

    }

    else if((array[0][0] == 'o' && array[0][1] == 'o' && array[0][2] == 'o') ||
(array[1][0] == 'o' && array[1][1] == 'o' && array[1][2] == 'o') || (array[2][0]
== 'o' && array[2][1] == 'o' && array[2][2] == 'o') || (array[0][0] == 'o' &&
array[1][0] == 'o' && array[2][0] == 'o') || (array[0][1] == 'o' && array[1][1] ==
'o' && array[2][1] == 'o') || (array[0][2] == 'o' && array[1][2] == 'o' &&
array[2][2] == 'o') || (array[0][0] == 'o' && array[1][1] == 'o' && array[2][2] ==
'o') || (array[0][2] == 'o' && array[1][1] == 'o' && array[2][0] == 'o'))

    {

        cout << "!! Congrulations !!" << endl;

        cout << "Player 2 has won" << endl;

        break;

    }

else

{

    continue;

}

}

}

```

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