**PROGRAM FOR TIC TAC TOE:**

#include <iostream>

using namespace std;

char num[10] = {'o','1','2','3','4','5','6','7','8','9'};

/\*

Function to return status 1 for game over with a success,

-1 for game in progress & 0 for game over & draw situation.

\*/

int win()

{

if (num[1] == num[2] && num[2] == num[3])

return 1;

else if (num[4] == num[5] && num[5] == num[6])

return 1;

else if (num[7] == num[8] && num[8] == num[9])

return 1;

else if (num[1] == num[4] && num[4] == num[7])

return 1;

else if (num[2] == num[5] && num[5] == num[8])

return 1;

else if (num[3] == num[6] && num[6] == num[9])

return 1;

else if (num[1] == num[5] && num[5] == num[9])

return 1;

else if (num[3] == num[5] && num[5] == num[7])

return 1;

else if (num[1] != '1' && num[2] != '2' && num[3] != '3'

&& num[4] != '4' && num[5] != '5' && num[6] != '6'

&& num[7] != '7' && num[8] != '8' && num[9] != '9')

return 0;

else

return -1;

}

void game() //Function to draw the player's game board along with there input

{

cout << "\n\n\tTic Tac Toe\n\n";

cout << "Player 1 (X) - Player 2 (O)" << endl << endl;

cout << endl;

cout << " | | " << endl;

cout << " " << num[1] << " | " << num[2] << " | " << num[3] << endl;

cout << "\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_" << endl;

cout << " | | " << endl;

cout << " " << num[4] << " | " << num[5] << " | " << num[6] << endl;

cout << "\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_" << endl;

cout << " | | " << endl;

cout << " " << num[7] << " | " << num[8] << " | " << num[9] << endl;

cout << " | | " << endl << endl;

}

int main()

{

int player = 1,i,ch;

char m;

do

{

game();

player=(player%2)?1:2;

cout << "Player " << player << ", enter a number: ";

cin >> ch;

m=(player == 1) ? 'X' : 'O';

if (ch == 1 && num[1] == '1')

num[1] = m;

else if (ch == 2 && num[2] == '2')

num[2] = m;

else if (ch == 3 && num[3] == '3')

num[3] = m;

else if (ch == 4 && num[4] == '4')

num[4] = m;

else if (ch == 5 && num[5] == '5')

num[5] = m;

else if (ch == 6 && num[6] == '6')

num[6] = m;

else if (ch == 7 && num[7] == '7')

num[7] = m;

else if (ch == 8 && num[8] == '8')

num[8] = m;

else if (ch == 9 && num[9] == '9')

num[9] = m;

else

{

cout<<"Invalid move ";

player--;

cin.ignore();

cin.get();

}

i=win();

player++;

}while(i==-1);

game();

if(i==1)

cout<<"==>\aPlayer "<<--player<<" win ";

else

cout<<"==>\aGame draw";

cin.ignore();

cin.get();

}

**OUTPUT**:

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

1 | 2 | 3

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

4 | 5 | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

7 | 8 | 9

| |

Player 1, enter a number: 5

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

1 | 2 | 3

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

4 | X | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

7 | 8 | 9

| |

Player 2, enter a number: 1

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

O | 2 | 3

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

4 | X | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

7 | 8 | 9

| |

Player 1, enter a number: 9

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

O | 2 | 3

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

4 | X | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

7 | 8 | X

| |

Player 2, enter a number: 4

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

O | 2 | 3

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

O | X | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

7 | 8 | X

| |

Player 1, enter a number: 7

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

O | 2 | 3

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

O | X | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

X | 8 | X

| |

Player 2, enter a number: 8

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

O | 2 | 3

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

O | X | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

X | O | X

| |

Player 1, enter a number: 3

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

O | 2 | X

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

O | X | 6

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_

| |

X | O | X

| |

==> Player 1 win