/\*

***Name* :-** Abrar Mahedavi

***Roll No.* :-** 21035

***Title* :-** Tic-Tac-Toe gaming aplication using C++ programming.

*/\**

***Program :***

#include <iostream>

using namespace std;

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

int checkwin();

void board();

int main()

{

int player=1,i,choice;

char mark;

do

{

board();

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

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

cin >> choice;

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

if (choice == 1 && square[1] == '1')

square[1] = mark;

else if (choice == 2 && square[2] == '2')

square[2] = mark;

else if (choice == 3 && square[3] == '3')

square[3] = mark;

else if (choice == 4 && square[4] == '4')

square[4] = mark;

else if (choice == 5 && square[5] == '5')

square[5] = mark;

else if (choice == 6 && square[6] == '6')

square[6] = mark;

else if (choice == 7 && square[7] == '7')

square[7] = mark;

else if (choice == 8 && square[8] == '8')

square[8] = mark;

else if (choice == 9 && square[9] == '9')

square[9] = mark;

else

{

cout<<"Invalid move ";

player--;

}

i=checkwin();

player++;

}while(i==-1);

board();

if(i==1)

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

else

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

return 0;

}

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

FUNCTION TO RETURN GAME STATUS

1 FOR GAME IS OVER WITH RESULT

-1 FOR GAME IS IN PROGRESS

O GAME IS OVER AND NO RESULT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

int checkwin()

{

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

return 1;

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

return 1;

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

return 1;

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

return 1;

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

return 1;

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

return 1;

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

return 1;

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

return 1;

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

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

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

return 0;

else

return -1;

}

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

FUNCTION TO DRAW BOARD OF TIC TAC TOE WITH PLAYERS MARK

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

void board()

{

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

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

cout << endl;

cout << " | | " << endl;

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

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

cout << " | | " << endl;

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

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

cout << " | | " << endl;

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

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

}

***Output :***

compeng-sl2-08@compeng-sl2-08:~/Abrar$ g++ tictac.cpp

compeng-sl2-08@compeng-sl2-08:~/Abrar$ ./a.out

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

1 | 2 | 3

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

| |

4 | 5 | 6

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

| |

7 | 8 | 9

| |

Player 1, enter a number: 1

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

4 | 5 | 6

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

| |

7 | 8 | 9

| |

Player 2, enter a number: 5

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

4 | O | 6

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

| |

7 | 8 | 9

| |

Player 1, enter a number: 2

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | X | 3

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

| |

4 | O | 6

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

| |

7 | 8 | 9

| |

Player 2, enter a number: 3

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | X | O

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

| |

4 | O | 6

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

| |

7 | 8 | 9

| |

Player 1, enter a number: 7

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | X | O

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

| |

4 | O | 6

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

| |

X | 8 | 9

| |

Player 2, enter a number: 6

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | X | O

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

| |

4 | O | O

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

| |

X | 8 | 9

| |

Player 1, enter a number: 4

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | X | O

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

| |

X | O | O

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

| |

X | 8 | 9

| |

==>Player 1 win //PLAYER 1 WIN THE GAME

compeng-sl2-08@compeng-sl2-08:~/Abrar$ g++ tictac.cpp

compeng-sl2-08@compeng-sl2-08:~/Abrar$ ./a.out

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

1 | 2 | 3

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

| |

4 | 5 | 6

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

| |

7 | 8 | 9

| |

Player 1, enter a number: 1

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

4 | 5 | 6

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

| |

7 | 8 | 9

| |

Player 2, enter a number: 6

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

4 | 5 | O

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

| |

7 | 8 | 9

| |

Player 1, enter a number: 9

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

4 | 5 | O

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

| |

7 | 8 | X

| |

Player 2, enter a number: 5

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

4 | O | O

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

| |

7 | 8 | X

| |

Player 1, enter a number: 4

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

X | O | O

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

| |

7 | 8 | X

| |

Player 2, enter a number: 7

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

X | O | O

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

| |

O | 8 | X

| |

Player 1, enter a number: 2

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | X | 3

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

| |

X | O | O

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

| |

O | 8 | X

| |

Player 2, enter a number: 3

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | X | O

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

| |

X | O | O

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

| |

O | 8 | X

| |

==>Player 2 win \\PLAYER 2 WIN THE GAME

compeng-sl2-08@compeng-sl2-08:~/Abrar$ g++ tictac.cpp

compeng-sl2-08@compeng-sl2-08:~/Abrar$ ./a.out

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

1 | 2 | 3

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

| |

4 | 5 | 6

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

| |

7 | 8 | 9

| |

Player 1, enter a number: 1

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | 2 | 3

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

| |

4 | 5 | 6

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

| |

7 | 8 | 9

| |

Player 2, enter a number: 2

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | 3

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

| |

4 | 5 | 6

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

| |

7 | 8 | 9

| |

Player 1, enter a number: 5

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | 3

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

| |

4 | X | 6

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

| |

7 | 8 | 9

| |

Player 2, enter a number: 9

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | 3

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

| |

4 | X | 6

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

| |

7 | 8 | O

| |

Player 1, enter a number: 8

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | 3

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

| |

4 | X | 6

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

| |

7 | X | O

| |

Player 2, enter a number: 7

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | 3

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

| |

4 | X | 6

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

| |

O | X | O

| |

Player 1, enter a number: 3

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | X

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

| |

4 | X | 6

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

| |

O | X | O

| |

Player 2, enter a number: 4

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | X

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

| |

O | X | 6

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

| |

O | X | O

| |

Player 1, enter a number: 6

Tic Tac Toe

Player 1 (X) - Player 2 (O)

| |

X | O | X

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

| |

O | X | X

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

| |

O | X | O

| |

==>Game draw \\GAME DRAW