

Name of the project

TIC TAC TOE

Team members:

Reg. No. – Name

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Brief Introduction about the project

Tic-tac-toe is a simple, two-player game that, if played optimally by both players, will always result in a tie. The game is also called noughts and crosses or Xs and Os. Tic-tac-toe is a game that is traditionally played by being drawn on paper, and it can be played on a computer or on a variety of media

Program

/*****

Online C Compiler.

Code, Compile, Run and Debug C program online.

Write your code in this editor and press "Run" button to compile and execute it.

*****/

#include <stdio.h>

#include <conio.h>

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;

        printf("Player %d, enter a number: ", player);
        scanf("%d", &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
    {
        printf("Invalid move ");

        player--;
        getch();
    }
    i = checkwin();

    player++;
}while (i == - 1);

board();

if (i == 1)
    printf("==>\aPlayer %d win ", --player);
else
    printf("==>\aGame draw");

```

```

    getch();

    return 0;
}

/*****

FUNCTION TO RETURN GAME STATUS
1 FOR GAME IS OVER WITH RESULT
-1 FOR GAME IS IN PROGRESS
0 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()
{
    system("cls");
    printf("\n\n\tTic Tac Toe\n\n");

    printf("Player 1 (X) - Player 2 (O)\n\n\n");
}

```

```

printf("  |  |  \n");
printf(" %c | %c | %c \n", square[1], square[2], square[3]);

printf("____|____|____\n");
printf("  |  |  \n");

printf(" %c | %c | %c \n", square[4], square[5], square[6]);

printf("____|____|____\n");
printf("  |  |  \n");

printf(" %c | %c | %c \n", square[7], square[8], square[9]);

printf("  |  |  \n\n");
}

/*****

END OF PROJECT

*****/

```

Sample Input and Output

```
input
main.c:134:5: warning: implicit de
claration of function 'system' [-W
implicit-function-declaration]
  134 |     system("cls");
      |         ^~~~~~
sh: 1: cls: not found

      Tic Tac Toe

Player 1 (X) - Player 2 (O)

  1 | 2 | 3
  --|---|---
  4 | 5 | 6
  --|---|---
  7 | 8 | 9
  |   |

Player 1, enter a number: 
```

- IT'S A INPUT

```
input

  X | X | 3
  --|---|---
  O | O | 6
  --|---|---
  X | 8 | 9
  |   |

Player 2, enter a number: 6
sh: 1: cls: not found

      Tic Tac Toe

Player 1 (X) - Player 2 (O)

  X | X | 3
  --|---|---
  O | O | O
  --|---|---
  X | 8 | 9
  |   |

==>Player 2 win

...Program finished with exit code
0
Press ENTER to exit console.
```

- Give any number from 1to9
- Player 1 marks=x
- Player 2 marks=o
- It comes output