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CLASS:FY.BSc.COMPUTER SCIENCE

TITLE OF THE C PROJECT:TIC TAC TOE GAME

CODE:

```c
#include <stdio.h>
#include <conio.h>
char square [10] = { '0', '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': '0';
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')
```

```c
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 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;
```

```c
}
/*FUNCTION TO DRAW BOARD OF TIC TAC TOE WITH PLAYERS MARK*/
void board()
{
printf("\n\n\tTic Tac Toe\n\n");
printf("Player 1 (X)-Player 2 (0)\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");
}
/*END OF PROJECT*/
```
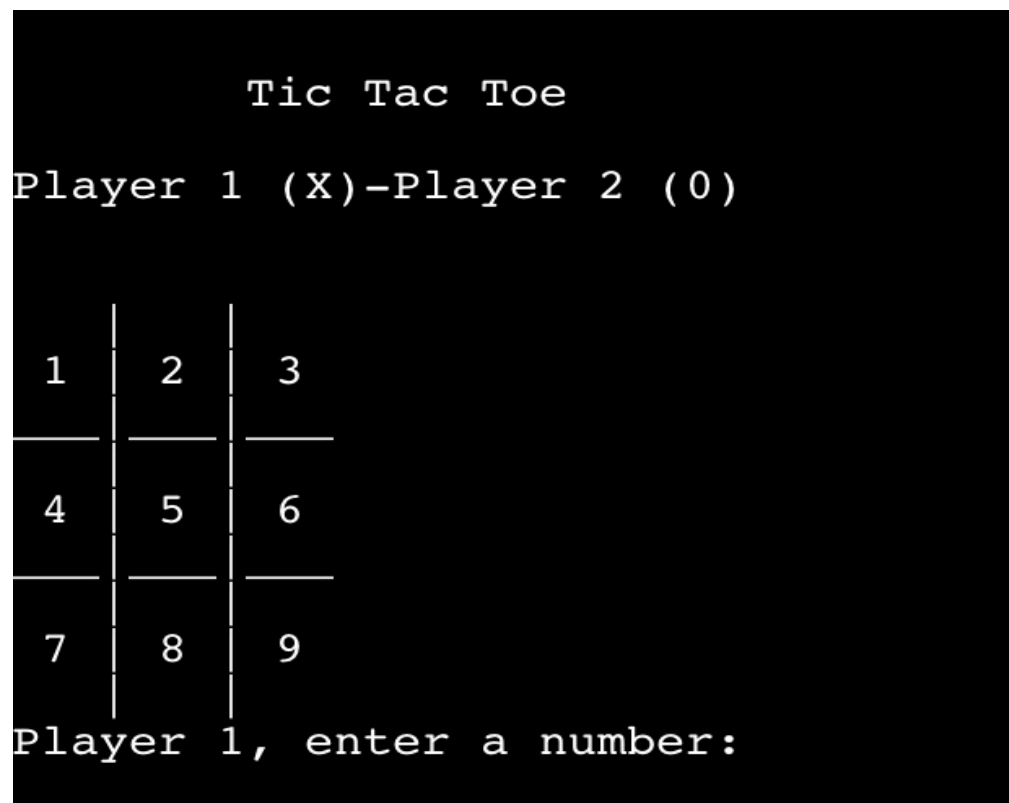
```
            Tic Tac Toe

Player 1 (X)-Player 2 (0)


    |   |
  1 | 2 | 3
 ___|___|___
    |   |
  4 | 5 | 6
 ___|___|___
    |   |
  7 | 8 | 9
    |   |
Player 1, enter a number: 5


            Tic Tac Toe

Player 1 (X)-Player 2 (0)

    |   |
  1 | 2 | 3
 ___|___|___
    |   |
  4 | X | 6
 ___|___|___
    |   |
  7 | 8 | 9
    |   |
Player 2, enter a number: 9
```

```
          Tic Tac Toe

Player 1 (X)-Player 2 (0)


     |   |
   1 | 2 | 3
  ___|___|___
     |   |
   4 | X | 6
  ___|___|___
     |   |
   7 | 8 | 0
     |   |
Player 1, enter a number: 7


          Tic Tac Toe

Player 1 (X)-Player 2 (0)


     |   |
   1 | 2 | 3
  ___|___|___
     |   |
   4 | X | 6
  ___|___|___
     |   |
   X | 8 | 0
     |   |
Player 2, enter a number: 3
```

```
                Tic Tac Toe

Player 1 (X)-Player 2 (0)


      |     |
   1  |  2  |  0
 ___  | ___ | ___
      |     |
   4  |  X  |  6
 ___  | ___ | ___
      |     |
   X  |  8  |  0
      |     |
Player 1, enter a number: 1


                Tic Tac Toe

Player 1 (X)-Player 2 (0)


      |     |
   X  |  2  |  0
 ___  | ___ | ___
      |     |
   4  |  X  |  6
 ___  | ___ | ___
      |     |
   X  |  8  |  0
      |     |
Player 2, enter a number: 4
```

```
                 Tic Tac Toe
 Player 1 (X)-Player 2 (0)


     X  |  2  |  0
    ____|_____|____
        |     |
     0  |  X  |  6
    ____|_____|____
        |     |
     X  |  8  |  0
        |     |
 Player 1, enter a number: 2
```

```
        Tic Tac Toe

Player 1 (X)-Player 2 (0)


  X | X | 0
 ___|___|___
  0 | X | 6
 ___|___|___
  X | 8 | 0
    |   |
Player 2, enter a number: 6


        Tic Tac Toe

Player 1 (X)-Player 2 (0)


  X | X | 0
 ___|___|___
  0 | X | 0
 ___|___|___
  X | 8 | 0
    |   |
==>Player 2 win
```
...Program finished with exit code 0
Press ENTER to exit console.