#include <stdio.h>

#include <stdlib.h>

//to take some specific inputs

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

//char array to replace the number with X or O

int choice, player;

int checkWin();

void displayBoard();

void markBoard(char mark);

int main()

{

int gameStatus;

char mark;

player = 1;

do{

displayBoard();

//change turns

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

//Input

printf("Player %d,enter a number: ",player);

scanf("%d",&choice);

//set the correct character based on player turn

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

//set board based on user choice or invalid choice

markBoard(mark);

gameStatus = checkWin();

player ++;

}while(gameStatus == -1);

if(gameStatus == 1) //player = 2

printf("==>Player %d win \n\n",--player);

else{

printf("==>Game draw\n\n");

}

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()

{

int returnValue = 0;

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

{

returnValue = 1;

}

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

returnValue = 1;

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

returnValue = 1;

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

returnValue = 1;

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

returnValue = 1;

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

returnValue = 1;

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

returnValue = 1;

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

returnValue = 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')

returnValue = 0;

else

returnValue = -1;

return returnValue;

}

//Function to draw board of Tic Tac Toe with players mark

void displayBoard()

{

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");

}

/\*

Set the board with the correct character,

X or O in the correct spot in the array

\*/

void markBoard(char mark)

{

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 ");

player--;

}

}