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TY-CS-D

Roll no:05

Assignment 1:

#include <stdio.h>

#include <conio.h>

void printBoard();

int checkWin();

void system();

char board[]={'0','1','2','3','4','5','6','7','8','9'};

void main(){

int player=1,input;

printBoard();

while (1)

{

player=(player%2==0) ? 2 : 1;

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

printf("Please enter place For Player %d\n",player);

scanf("%d",&input);

if(input<1 || input>9){

printf("invalid input\n");

continue;

}

if(board[input]=='X' || board[input]=='O'){

printf("Already marked\n");

continue;

}

else{

board[input]=mark;

}

printBoard();

int result=checkWin();

if(result==1){

printf("Player %d is the Winner",player);

return;

}

else if(result==0)

{

printf("draw");

return;

}

player++;

}

}

void printBoard(){

system("clear");

printf("\n\n");

printf("=== TIC TAC TOE ===\n\n");

printf("Mark for player 1 - X\n");

printf("Mark for player 2 - O\n");

printf(" | | \n");

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

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

printf(" | | \n");

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

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

printf(" | | \n");

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

printf(" | | \n");

printf("\n\n");

}

int checkWin(){

if(board[1]==board[2] && board[2]==board[3]){

return 1;

}

if(board[1]==board[4] && board[4]==board[7]){

return 1;

}

if(board[7]==board[8] && board[8]==board[9]){

return 1;

}

if(board[3]==board[6] && board[6]==board[9]){

return 1;

}

if(board[1]==board[5] && board[5]==board[9]){

return 1;

}

if(board[3]==board[5] && board[5]==board[7]){

return 1;

}

if(board[2]==board[5] && board[5]==board[8]){

return 1;

}

if(board[4]==board[5] && board[5]==board[6]){

return 1;

}

int count=0;

for (int i = 1; i <=9; i++)

{

if(board[i]=='X' || board[i]=='O')

{

count++;

}

}

if(count==9){

return 0;

}

return -1;

}