## SEMISTER FINAL PROJECT

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## PROJECT 🡪 CONNECT FOUR GAME..

# Code :-

#include<iostream>

#include<stdlib.h>

#include<iomanip>

#include<time.h>

using namespace std;

void toss(int num);

string arr1[4][4] = { {"1","2","3","4"},{"5","6","7","8"},{"9","10","11","12"},{"13","14","15","16"} };

int conditions();

void board();

int count1 = 0;

int count2 = 0;

int random;

int main()

{

int choice;

char mark;

int i;

int player = 1;

// here we can print the board by hard code...

for (int a = 0;a < 4;a++)

{

cout << setw(5);

for (int b = 0;b < 4;b++)

{

cout << "\_\_\_\_.";

}

cout << endl;

cout << "|";

for (int b = 0;b < 4;b++)

{

cout << " ";

cout << "\*";

cout << " | ";

}

cout << endl;

}

for (int a = 0;a < 21;a++)

{

cout << "\_";

}

//here we can produce the random number

// which select the who can start game first...

srand(time(NULL));

cout << endl;

cout << endl;

// turn can calling ...

cout << setw(15) << " " << "CHOSE THE TOSS " << endl;

cout << setw(8) << " " << "1. HEAD";

cout << setw(16) << " " << "2. TAIL";

cout << endl;

{

// random number is store in random number variable

random = (rand() % 2) + 1;

int store;

toss(random);

}

do

{

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

// calling the function of board...

board();

cout << endl;

cout << "please Enter the value 1 TO 16 by player " << random << " : " << endl;

cout << endl;

// here choice the player where he want to go...

cin >> choice;

// mark can store the char of A and B ...

mark = (random == 1) ? 'A' : 'B';

if (mark == 'A')

{

count1++;

}

else

{

count2++;

}

// here enter number can repalce to array index 1 to 16 ...

if (choice == 1 && arr1[0][0] == "1")

{

arr1[0][0] = mark;

}

else if (choice == 2 && arr1[0][1] == "2")

{

arr1[0][1] = mark;

}

else if (choice == 3 && arr1[0][2] == "3")

{

arr1[0][2] = mark;

}

else if (choice == 4 && arr1[0][3] == "4")

{

arr1[0][3] = mark;

}

else if (choice == 5 && arr1[1][0] == "5")

{

arr1[1][0] = mark;

}

else if (choice == 6 && arr1[1][1] == "6")

{

arr1[1][1] = mark;

}

else if (choice == 7 && arr1[1][2] == "7")

{

arr1[1][2] = mark;

}

else if (choice == 8 && arr1[1][3] == "8")

{

arr1[1][3] = mark;

}

else if (choice == 9 && arr1[2][0] == "9")

{

arr1[2][0] = mark;

}

else if (choice == 10 && arr1[2][1] == "10")

{

arr1[2][1] = mark;

}

else if (choice == 11 && arr1[2][2] == "11")

{

arr1[2][2] = mark;

}

else if (choice == 12 && arr1[2][3] == "12")

{

arr1[2][3] = mark;

}

else if (choice == 13 && arr1[3][0] == "13")

{

arr1[3][0] = mark;

}

else if (choice == 14 && arr1[3][1] == "14")

{

arr1[3][1] = mark;

}

else if (choice == 15 && arr1[3][2] == "15")

{

arr1[3][2] = mark;

}

else if (choice == 16 && arr1[3][3] == "16")

{

arr1[3][3] = mark;

}

else

// if enter number is greater than 16 than else will print...

{

cout << "you put the invalid number put between 1 to 16 " << endl;

cout << "Again input the number " << endl;

random--;

cin.ignore();

cin.get();

fflush(stdin);

}

i = conditions();

random++;

} while (i == -1);

board();

// to dispaly who is win ....

if (i == 1)

{

cout << "player of " << --random << " is win " << endl;

if (count1 > count2)

{

cout << "player A is win : " << count1;

}

else

{

cout << "player B is win : " << count2;

}

}

else

// if both user can enter the game will draw...

{

if (count1 + count2 == 16)

{

cout << "GAME DRAW" << endl;

exit(0);

}

}

cin.ignore();

cin.get();

fflush(stdin);

}

// Now function defination waill start ...

void toss(int num)

{

int choice;

int rand = num;

cout << setw(10) << " " << "enter the input for select option " << endl;

cin >> choice;

// function call who will start the game..

if (rand == choice)

{

cout << "you won the toss " << endl;

cout << "player 1 will play :" << endl;

}

else

{

cout << "you lost the toss other player will play " << endl;

cout << "player 2 will play :" << endl;

}

}

// this is all the condition where is the probaliy of match the four connect ..

int conditions()

{

if (arr1[0][0] == arr1[0][1] && arr1[0][1] == arr1[0][2] && arr1[0][2] == arr1[0][3])//11

{

return 1;

}

else if (arr1[0][0] == arr1[1][0] && arr1[1][0] == arr1[2][0] && arr1[2][0] == arr1[3][0])//12

{

return 1;

}

else if (arr1[0][0] == arr1[1][1] && arr1[1][1] == arr1[2][2] && arr1[2][2] == arr1[3][3])//13

{

return 1;

}

else if (arr1[0][1] == arr1[1][1] && arr1[1][1] == arr1[2][1] && arr1[2][1] == arr1[3][1])//21

{

return 1;

}

else if (arr1[0][0] == arr1[0][1] && arr1[0][1] == arr1[0][2] && arr1[0][2] == arr1[0][3])//22

{

return 1;

}

else if (arr1[0][2] == arr1[1][2] && arr1[1][2] == arr1[2][2] && arr1[2][2] == arr1[3][2])//31

{

return 1;

}

else if (arr1[0][0] == arr1[0][1] && arr1[0][1] == arr1[0][2] && arr1[0][2] == arr1[0][3])//32

{

return 1;

}

else if (arr1[0][3] == arr1[1][3] && arr1[1][3] == arr1[2][3] && arr1[2][3] == arr1[3][3])//41

{

return 1;

}

else if (arr1[0][3] == arr1[1][2] && arr1[1][2] == arr1[2][1] && arr1[2][1] == arr1[3][0])//42

{

return 1;

}

else if (arr1[0][0] == arr1[1][0] && arr1[1][0] == arr1[2][0] && arr1[2][0] == arr1[3][0])//43

{

return 1;

}

else if (arr1[0][0] == arr1[1][0] && arr1[1][0] == arr1[2][0] && arr1[2][0] == arr1[3][0])//51

{

return 1;

}

else if (arr1[1][0] == arr1[1][1] && arr1[1][1] == arr1[1][2] && arr1[1][2] == arr1[1][3])//52

{

return 1;

}

else if (arr1[0][1] == arr1[1][1] && arr1[1][1] == arr1[2][1] && arr1[2][1] == arr1[3][1])//61

{

return 1;

}

else if (arr1[1][0] == arr1[1][1] && arr1[1][1] == arr1[1][2] && arr1[1][2] == arr1[1][3])//62

{

return 1;

}

else if (arr1[0][2] == arr1[1][2] && arr1[1][2] == arr1[2][2] && arr1[2][2] == arr1[3][2])//71

{

return 1;

}

else if (arr1[1][0] == arr1[1][1] && arr1[1][1] == arr1[1][2] && arr1[1][2] == arr1[1][3])//72

{

return 1;

}

else if (arr1[0][3] == arr1[1][3] && arr1[1][3] == arr1[2][3] && arr1[2][3] == arr1[3][3])//81

{

return 1;

}

else if (arr1[1][0] == arr1[1][1] && arr1[1][1] == arr1[1][2] && arr1[1][2] == arr1[1][3])//82

{

return 1;

}

else if (arr1[0][0] == arr1[1][0] && arr1[1][0] == arr1[2][0] && arr1[2][0] == arr1[3][0])//91

{

return 1;

}

else if (arr1[2][0] == arr1[2][1] && arr1[2][1] == arr1[2][2] && arr1[2][2] == arr1[2][3])//92

{

return 1;

}

else if (arr1[2][0] == arr1[2][1] && arr1[2][1] == arr1[2][2] && arr1[2][2] == arr1[2][3])//101

{

return 1;

}

else if (arr1[0][1] == arr1[1][1] && arr1[1][1] == arr1[2][1] && arr1[2][1] == arr1[3][1])//102

{

return 1;

}

else if (arr1[2][0] == arr1[2][1] && arr1[2][1] == arr1[2][2] && arr1[2][2] == arr1[2][3])//111

{

return 1;

}

else if (arr1[0][2] == arr1[1][2] && arr1[1][2] == arr1[2][2] && arr1[2][2] == arr1[3][2])//112

{

return 1;

}

else if (arr1[0][3] == arr1[1][3] && arr1[1][3] == arr1[2][3] && arr1[2][3] == arr1[3][3])//121

{

return 1;

}

else if (arr1[2][0] == arr1[2][1] && arr1[2][1] == arr1[2][2] && arr1[2][2] == arr1[2][3])//122

{

return 1;

}

else if (arr1[0][0] == arr1[1][0] && arr1[1][0] == arr1[2][0] && arr1[2][0] == arr1[3][0])//131

{

return 1;

}

else if (arr1[3][0] == arr1[3][1] && arr1[3][1] == arr1[3][2] && arr1[3][2] == arr1[3][3])//132

{

return 1;

}

else if (arr1[0][3] == arr1[1][2] && arr1[1][2] == arr1[2][1] && arr1[2][1] == arr1[3][0])//133

{

return 1;

}

else if (arr1[0][1] == arr1[1][1] && arr1[1][1] == arr1[2][1] && arr1[2][1] == arr1[3][1])//141

{

return 1;

}

else if (arr1[3][0] == arr1[3][1] && arr1[3][1] == arr1[3][2] && arr1[3][2] == arr1[3][3])//142

{

return 1;

}

else if (arr1[0][2] == arr1[1][2] && arr1[1][2] == arr1[2][2] && arr1[2][2] == arr1[3][2])//151

{

return 1;

}

else if (arr1[3][0] == arr1[3][1] && arr1[3][1] == arr1[3][2] && arr1[3][2] == arr1[3][3])//152

{

return 1;

}

else if (arr1[3][0] == arr1[3][1] && arr1[3][1] == arr1[3][2] && arr1[3][2] == arr1[3][3])//161

{

return 1;

}

else if (arr1[0][3] == arr1[1][3] && arr1[1][3] == arr1[2][3] && arr1[2][3] == arr1[3][3])//162

{

return 1;

}

else if (arr1[0][0] == arr1[1][1] && arr1[1][1] == arr1[2][2] && arr1[2][2] == arr1[3][3])//163

{

return 1;

}

// if above condition will not run than else return 0 ...

else if (arr1[0][0] != "1" && arr1[0][1] != "2" && arr1[0][2] != "3" && arr1[0][4] != "4" && arr1[1][0] != "5" && arr1[1][1] != "6" && arr1[1][2] != "7" && arr1[1][3] != "8" && arr1[2][0] != "9" && arr1[2][1] != "10" && arr1[2][2] != "11" && arr1[2][3] != "12" && arr1[3][0] != "13" && arr1[3][1] != "14" && arr1[3][2] != "15" && arr1[3][3] != "16")

{

return 0;

}

else

{

return -1;

}

}

// this is display board to display the whole phenmorma ...

void board()

{

system("cls");

system("color 0A");

cout << setw(10) << " " << "---> Turn of player " << random << endl;

cout << endl;

cout << setw(7) << " " << "player 1 : (A) - " << setw(1) << " " << "player 2 : (B)" << endl;

cout << "Turns of player A :" << count1 << " " << "Turns of player B : " << count2 << endl;

cout << "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_." << endl;

cout << "| " << arr1[0][0] << " | " << arr1[0][1] << " | " << arr1[0][2] << " | " << arr1[0][3] << " |" << endl;

cout << "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_." << endl;

cout << "| " << arr1[1][0] << " | " << arr1[1][1] << " | " << arr1[1][2] << " | " << arr1[1][3] << " |" << endl;

cout << "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_." << endl;

cout << "| " << arr1[2][0] << " | " << arr1[2][1] << " | " << arr1[2][2] << " | " << arr1[2][3] << " |" << endl;

cout << "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_." << endl;

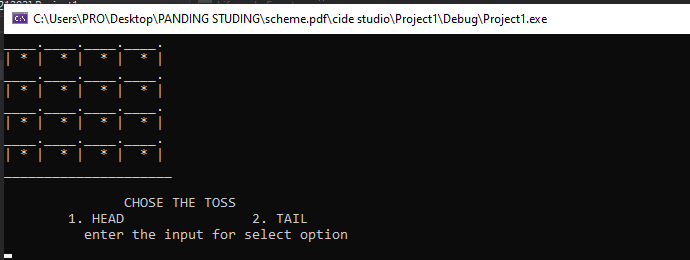
cout << "| " << arr1[3][0] << " | " << arr1[3][1] << " | " << arr1[3][2] << " | " << arr1[3][3] << " |" << endl;

cout << "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_." << endl;

}

## Console :-

First console :-



Second console :-

