#include<iostream>

#include<time.h>

#include<string>

using namespace std;

void auto\_game()

{

    int sec[4];

    int guess[4];

    int count=1;

    int flag;

    int post;

    int npost;

    int nots;

    int row;

    int np;

    int rounds=0;

    int score=0;

    int play=1;

    string name;

    cout<<"Enter your name \n=";

    cin>>name;

  while(play==1)

  {

    rounds++;

    srand(time(NULL));

    do

    {

    for(int row=0;row<4;row++)

    {

    sec[row]=rand()%10; //generate random number in array//

    }

    }

    while(sec[0]==sec[1] || sec[0]==sec[2] || sec[0]==sec[3] || sec[1]==sec[2] || sec[1]==sec[3] || sec[2]==sec[3] );

cout<<"----------------\n";

        for(int row=0;row<4;row++)

        {

        cout<<sec[row]<<" ";

        }

cout<<"\n----------------\n";

// 10 chances  //

while(flag!=4 && count<=10)

{

post=0;

npost=0;

np=0;

flag=0;

cout<<"chance # ="<<count;

cout<<"\n----------------\n";

cout<<"enter  four numbers (1 to 9) to guess secret code \n";

    for(int row=0;row<4;row++)

    {

        cin>>guess[row]; //taking input from the users //

    }

//comparison of all elemensts of arrays //

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

{

    if(sec[row]==guess[row])

    {

        flag++;

    }

}

//comparison Main Logic //

    if(flag!=4)

    {

        for(int row=0;row<4;row++)

        {

            for(int r=0;r<4;r++)

            {

                if(guess[row]==sec[r] && row==r)// if number and position is same //

                {

                    post++; // no. of number in position //

                }

                    else if(guess[row]==sec[r] && row!=r)//if number is same but position is not same //

                    {

                        npost++;  // no. of number not in position //

                    }

                        else if(guess[row]!=sec[r] && row!=r) // means nothing is common //

                        {

                        cout<<"";

                        }

            }

        }

cout<<endl;

cout<<post<<" number In position\n\n";

cout<<npost<<" number present but not in position\n\n";

np=4-post-npost;

cout<<np<<" number donot exist\n\n";

    }

count++;

}

if(flag==4)

{

    cout<<"ALL 4 numbers are in position\n\n";

    cout<<name<<"you win this game\n";

    score++;

}

else

{

      cout<<name<<" you lose  this game\nTHE secret number was =  ";

       for(int row=0;row<4;row++)

        {

        cout<<sec[row]<<" ";

        }

}

flag=0;

count=1;

cout<<endl;

cout<<"score = "<<score<<endl;

cout<<"rounds = "<<rounds<<endl;

cout<<"press 1 to continue game again \n";

cin>>play;

}

cout<<"you exit this game \n";

}

//^^^^^^^^^^^^^^^^^^^^//

void MultiPlayers()

{

    cout<<"MultiPlayers\n";

}

void instruction()

{

    cout<<"-------------------------------------------------INSTRUCTIONS---------------------------------------------------------------\n";

    cout<<"you have to guess  4 number.\nCompiler will give you following hints.\n\n1)) number is present on exact position.\n";

    cout<<"2))number is present but  NOT on exact position\n3))number DONOT exist.";

}

int main()

{

int opt;

cout<<"--------------------------------------------------------------------------------------------------------------------------------\n";

cout<<"------------------------------------------------  Classic Code Craking Game  ---------------------------------------------------\n";

cout<<"-----------------------------------------------------  MASTER MIND  ------------------------------------------------------------\n";

cout<<"--------------------------------------------------------------------------------------------------------------------------------\n";

cout<<endl;

cout<<"1))To play with compiler\n2))MultiPlayers\n3))Instruction\n4))To Exit game\n=" ;

cout<<"select an option\n=";

cin>>opt;

while(opt!=4)

switch(opt)

{

case 1:auto\_game();

break;

case 2:MultiPlayers();

break;

case 3:instruction();

break;

case 4:

break;

default:

cout<<"wrong input\n";

cout<<"select an option\n=";

cin>>opt;

break;

}

cout<<"you exit game\n";

return 0;

}