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**Subject:** Object Oriented Programming (Lab) Project

**Department:** Computer Science(2019-2023)

# **Statement**

Create a **Snake and Ladder** Game using *OOP* Concept of **C++**.

# **Source Code:**

#include <iostream>

#include <conio.h>

#include <cstdlib>

#include <stdlib.h>

#include <ctime>

using namespace std;

class game

{

public:

int p1pos,n1,m1=0,cp1,minus1,plus1,plus2,minus2,p2pos,n2,m2=0,cp2;

string p1roll,p2roll;

int posforp1()

{

p1pos=(rand()%7);

}

int posforp2()

{

p2pos=(rand()%7);

}

void playerturns()

{

cout<<"=============================SNAKE AND LADDER GAME============================================"<<endl;

cout<<"------------------------------>Created by Musab Bin Usman<------------------------------------"<<endl;

cout<<"\t \t \t"<<"This game winning score is 50!"<<endl<<endl;

cout<<"----------------------------------------BEST OF LUCK!-------------------------------"<<endl<<endl;

//Player 1//

for(int i=0;i<=100;i++)

{

n1=m1;

cout<<"P1 Enter 'Roll' to Roll a dice: "<<endl;

cin>>p1roll;

if((p1roll=="ROLL")or(p1roll=="roll")or(p1roll=="Roll"))

{

posforp1();

cp1=n1+posforp1();

}

if((cp1==15)or(cp1==25)or(cp1==35)or(cp1==45)or(cp1==49))

{

cp1=cp1-5;

cout<<"Current position of Player 1= "<<cp1<<"(Snake=(-5))"<<endl;

}

else if((cp1==20)or(cp1==30)or(cp1==40)or(cp1==27)or(cp1==37))

{

cp1=cp1+5;

cout<<"Current position of Player 1= "<<cp1<<"(Ladder=(+5))"<<endl;

}

else

{

cout<<"Current position of Player 1="<<cp1<<endl;

}

m1=cp1;

//Player 2//

n2=m2;

cout<<"P2 Enter 'Roll' to Roll a dice: "<<endl;

cin>>p2roll;

if((p2roll=="ROLL")or(p2roll=="roll")or(p2roll=="Roll"))

{

posforp2();

cp2=n2+posforp2();

}

if((cp2==15)or(cp2==25)or(cp2==35)or(cp2==45)or(cp2==49))

{

cp2=cp2-5;

cout<<"Current position of Player 2= "<<cp2<<"(Snake=(-5))"<<endl;

}

else if((cp2==20)or(cp2==30)or(cp2==40)or(cp2==27)or(cp2==37))

{

cp2=cp2+5;

cout<<"Current position of Player 2= "<<cp2<<"(Ladder=(+5))"<<endl;

}

else

{

cout<<"Current position of Player 2="<<cp2<<endl;

}

m2=cp2;

if((cp1<50)and(cp2<50))

{

continue;

}

else if((cp1>=50)or(cp2>=50))

{

if(cp1>=50)

{

cout<<"Congratulations! Player 1 wins!";

}

else if(cp2>=50)

{

cout<<"\t \t"<<"----------Congratulations! Player 2 wins!----------";

}

exit(0);

}

}

}

};

int main()

{

game obj;

obj.posforp2();

obj.posforp1();

obj.playerturns();

}