RANDOM NUMBER GENERATION INLAB  
ROLL NO: 61

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BATCH:A2

#include <iostream>

#include <bits/stdc++.h>

using namespace std;

int main()

{

int a, X0, c,X,m;

cout << "Enter the value of a: ";

cin >> a;

cout << "Enter the value of X0: ";

cin >> X0;

cout << "Enter the value of c: ";

cin >> c;

cout<<"Enter the value of m: ";

cin >> m;

int period = 0;;

vector<int> random\_numbers;

for(int i=0;i<= 100

; i++){

if (i==0) {

X = X0;

random\_numbers.emplace\_back(X);

}

else{

X = (a\*random\_numbers[i-1] + c)%m;

random\_numbers.emplace\_back(X);

}

}

for(int i=1;i<100;i++)

{

if(random\_numbers[i] == random\_numbers[0]){

period = i;

break;

}

}

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

cout << random\_numbers[i] << " ";

}

cout << "Period: "<<period;

}