**Name: Mosa. Rabeya**

**I’d: 191-15-12145**

**Section: O-14**

**Problem set 1**

**5. FIBONACCI:**

#include<iostream>

using namespace std;

int main()

{

int i,n,a[50];

cout<<"the number of fibo,want to see: ";

cin>>n;

a[0]=0;

a[1]=1;

for(i=2;i<n;i++)

{

a[i]=a[i-1]+a[i-2];

}

for(i=0;i<n;i++)

{

cout<<a[i]<<endl;

}

}

**6. LAST DIGIT OF FIBO:**

#include <iostream>

using namespace std;

int lastDigit(long long n) {

int first = 0;

int second = 1;

int res;

for (int i = 2; i <= n; i++) {

res = (first + second) % 10;

first = second;

second = res;

}

return res;

}

int main() {

int n;

cin >> n;

int c =lastDigit(n);

cout <<c;

return 0;

}

**7. GCD:**

#include<iostream>

using namespace std;

int main()

{

int n,m,r,gcd;

cout<<"input first number: ";

cin>>n;

cout<<"input second number: ";

cin>>m;

while(m!=0)

{

r=n%m;

n=m;

m=r;

}

cout<<n;

}

**8. LCM:**

#include<iostream>

using namespace std;

int main()

{

int n,m,r,gcd;

cout<<"input first number: ";

cin>>n;

cout<<"input second number: ";

cin>>m;

int x=n;

int y=m;

while(y!=0)

{

r=x%y;

x=y;

y=r;

}

int lcm=float(n\*m)/x;

cout<<lcm;

}