**ASSIGNMENT 7**

**1)** **Write a program to find the Nth term of the Fibonnaci series.**

#include<stdio.h>

int main(){

int a=0,b=1,c=0,i, n;

printf("Enter the term: ");

scanf("%d", &n);

if(n==1) printf("%d", a);

else if(n==2) printf("%d", b);

else{

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

a=b;

b=c;

c=a+b;

if(n==i) {

printf("%d", c);

break;

} else continue;

}

}

}

**2)** **Write a program to print first N terms of Fibonacci series.**

#include<stdio.h>

int main(){

int a=0,b=1,c=0,i, n;

printf("Enter n: ");

scanf("%d", &n);

printf("%d ", a);

for(i=3; i<=n; i++){

a=b;

b=c;

c=a+b;

printf("%d ", c);

}

}

**3)** **Write a program to check whether a given number is there in the Fibonacci**

**series or not.**

#include<stdio.h>

int main(){

int a=0,b=1,c=0,i, n;

printf("Enter the term: ");

scanf("%d", &n);

if(n==0) printf("%d is present in the Fibonacci series", n);

else if(n==1) printf("%d is present in the Fibonacci series", n);

else if(n>1){

for(i=2; i<=100; i++){

a=b;

b=c;

c=a+b;

if(n==c) {

printf("%d is present in the Fibonacci series", n);

break;

} else continue;

}

if(n!=c) printf("%d is not present in the Fibonacci series", n);

}

}

**4)** **Write a program to calculate HCF of two numbers.**

#include<stdio.h>

int main(){

int a,b,lcm,i, mul;

printf("Enter numbers: ");

scanf("%d %d", &a, &b);

for(i=2; i<a\*b; i++){

if(i%a==0 && i%b==0) break;

else continue;

}

mul=a\*b;

printf("HCF is %d", mul/i);

}

**5)** **Write a program to check whether two given numbers are co-prime**

**numbers or not.**

#include<stdio.h>

int main(){

int a,b,i,count=0;

printf("Enter numbers: ");

scanf("%d %d", &a, &b);

for(i=2; i<a\*b; i++){

if(i%a==0 && i%b==0) {

count++;

break;

}

else continue;

}

if(count==0) printf("%d and %d are co-prime", a, b);

else printf("%d and %d are not co-prime", a, b);

}

**6) Write a program to print all Prime numbers under 100.**

#include<stdio.h>

int main(){

int a;

for(int i=2; i<=100; i++){

a=1;

for(int j=2; j<=i/2; j++){

if(i%j==0) {

a++;

}

else continue;

}

if(a==1){

printf("%d\n", i);

}

}

}

**7) Write a program to print all Prime numbers between two given numbers.**

#include<stdio.h>

int main(){

int a,b,c;

printf("Enter two numbers: ");

scanf("%d %d", &a, &b);

for(int i=a; i<=b; i++){

c=1;

for(int j=2; j<=i/2; j++){

if(i%j==0) {

c++;

}

else continue;

}

if(c==1){

printf("%d\n", i);

}

}

}

**8)** **Write a program to find next Prime number of a given number.**

#include<stdio.h>

int main(){

int num, a, i;

printf("Enter number: ");

scanf("%d", &num);

for(i=num+1; i<=num+10; i++){

a=0;

for(int j=2; j<=i/2; j++){

if(i%j==0)

{

a++;

break;

}

}

if(a==0) {

printf("Prime number after %d is %d",num, i);

break;

}

}

}

**9)** **Write a program to check whether a given number is an Armstrong number or not.**

#include<stdio.h>

int main(){

int num,last, count=0, sum=0, org;

printf("Enter number: ");

scanf("%d", &num);

org=num;

while(num>0){

last=num%10;

sum+=(last\*last\*last);

num/=10;

}

if(org==sum) printf("%d is an Armstrong number", org);

else printf("%d is not an Armstrong number", org);

}

**10)** **Write a program to print all Armstrong numbers under 1000.**

#include<stdio.h>

int main(){

int i, org,last, sum;

for(int i=101; i<1000; i++){

org=i; sum=0;

while(org>0){

last=org%10;

sum+=(last\*last\*last);

org/=10;

}

if(sum==i) printf("%d is an Armstrong number\n", i);

}

}