Iterative Control Statements (Part - 2)

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

#include<stdio.h>

int main()

{

int a=1,b=0,temp,n;

printf("enter number: ");

scanf("%d",&n);

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

temp=a+b;

a=b;

b=temp;

}

printf("%d ",b);

}

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

#include<stdio.h>

int main()

{

int a=1,b=0,temp,n;

printf("enter number: ");

scanf("%d",&n);

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

temp=a+b;

a=b;

b=temp;

printf("%d ",b);

}

}

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=1,b=0,temp,n;

printf("enter number: ");

scanf("%d",&n);

while(b<=n){

temp=a+b;

a=b;

b=temp;

if(b==n)

{

temp=0;

break;

}

}

if(temp==0)

printf("given number is in fibonacci series");

else

printf("given number is not in fibonacci series");

}

4. Write a program to calculate HCF of two numbers

#include<stdio.h>

int main()

{

int a,b,hcf=1,min;

printf("enter two number: ");

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

min= a<b? a:b;

for(int i=1;i<min;i++){

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

{

hcf=i;

}

}

printf("hcf is %d",hcf);

}

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

numbers or not

#include<stdio.h>

int main()

{

int a,b,hcf=1,min;

printf("enter two number: ");

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

min= a<b? a:b;

for(int i=1;i<min;i++){

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

{

hcf=i;

if(hcf>1)

break;

}

}

if(hcf==1)

printf("given number is co prime ");

else

printf("given number is not a co prime ");

}

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

#include<stdio.h>

int main()

{

int a=2,factor;

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

{

factor=1;

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

{

if(i%j==0)

{

factor=0;

break;

}

}

if(factor)

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

}

}

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

#include<stdio.h>

int main()

{

int a,b,factor;

printf("enter the range: ");

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

if(b<a)

{

factor=b;

b=a;

a=factor;

}

while(a<=b){

factor=1;

for(int i=2;i<a;i++)

{

if (a%i==0)

{

factor=0;

break;

}

}

if(factor)

printf("%d\t",a);

a++;

}

}

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

#include<stdio.h>

int main()

{

int a,factor;

printf("enter number: ");

scanf("%d",&a);

a++;

while (1)

{

factor=1;

for(int i=2;i<a;i++)

{

if(a%i==0){

factor=0;

i++;

}

}

if(factor)

{

printf("%d",a);

break;

}

a++;

}

}

9. Write a program to check whether a given number is an Armstrong number

or not

#include<stdio.h>

#include<math.h>

int main(){

int a,b,c=0;

printf("enter number: ");

scanf("%d",&a);

b=a;

while(b>0)

{

c=c+(b%10)\*(b%10)\*(b%10);

b=b/10;

}

if(a==c)

printf("%d is armstrong number",c);

else

printf("%d is not armstrong number",c);

}

10. Write a program to print all Armstrong numbers under 100

#include<stdio.h>

int main()

{

int a,c;

for(int i=1;i<1000;i++)

{

a=i;

c=0;

while (a>0)

{

c=c+(a%10)\*(a%10)\*(a%10);

a=a/10;

}

if(i==c)

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

}

}