**More on functions in C Language**

1. ***Write a function to calculate LCM of two numbers. (TSRS).***

#include<stdio.h>

int LCM(int,int);

int main()

{

int a,b,ans;

printf("Enter two numbers:");

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

ans=LCM(a,b);

printf("LCM is %d of given two numbers.",ans);

return 0;

}

int LCM(int n1,int n2)

{

int i;

for(i=1; i<=n1\*n2; i++)

{

if(i%n1==0 && i%n2==0)

return i;

}

}

1. ***Write a function to calculate HCF of two numbers. (TSRS).***

#include<stdio.h>

int HCF(int,int);

int main()

{

int a,b,ans;

printf("Enter two numbers:");

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

ans=HCF(a,b);

printf("HCF is %d of given two numbers.",ans);

return 0;

}

int HCF(int n1,int n2)

{

int i,hcf;

for(i=1; i<=n1\*n2; i++)

{

if(i%n1==0 && i%n2==0)

break;

}

return hcf=n1\*n2/i;

}

1. ***Write a function to check whether a given number is Prime or not. (TSRS)***

#include<stdio.h>

int prime(int);

int main()

{

int a,ans;

printf("Enter a number:");

scanf("%d",&a);

ans=prime(a);

if(ans==0)

printf("%d is not prime number.",a);

else

printf("%d is prime number.",a);

return 0;

}

int prime(int n)

{

int i=2;

while(i<=n)

{

if(n%i!=0)

i++;

else

break;

}

if(i==n)

return 1;

else

return 0;

}

1. ***Write a function to find the next prime number of a given number. (TSRS).***

include<stdio.h>

int next\_prime(int);

int main()

{

int a,ans;

printf("Enter a number:");

scanf("%d",&a);

ans=next\_prime(a);

printf("%d is next prime number of %d.",ans,a);

return 0;

}

int next\_prime(int n)

{

int i,j=2;

while(n)

{

while(j<=n)

{

if(n%j==0)

break;

else

j++;

}

if(j==n)

break;

else

n++;

}

return j;

}

1. ***Write a function to print first N prime numbers (TSRN).***

#include<stdio.h>

void Nth\_prime(int);

int main()

{

int N;

printf("Enter a Nth number:");

scanf("%d",&N);

printf("first %d prime numbers:\n",N);

Nth\_prime(N);

return 0;

}

void Nth\_prime(int n)

{

int i=1,j=2,k=2,flag;

while(i<=n)

{

while(j)

{

for(k=2; k<=j; k++)

{

if(j%k==0)

break;

}

if(k==j)

break;

j++;

flag=j;

}

printf("%d ",j);

i++;

if(j==flag)

j=flag+1;

else

j=1+i;

}

}

1. ***Write a function to print all Prime numbers between two given numbers. (TSRN).***

#include<stdio.h>

void prime(int,int);

int main()

{

int a,b;

printf("Enter two numbers:");

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

printf("prime numbers between %d to %d:\n",a,b);

prime(a,b);

return 0;

}

void prime(int n,int m)

{

int i,j;

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

{

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

if(i%j==0)

break;

if(j==i)

printf("%d ",i);

}

}

1. ***Write a function to print first N terms of Fibonacci series (TSRN).***

#include<stdio.h>

void fibonnaci\_series(int);

int main()

{

int N;

printf("Enter Nth number:");

scanf("%d",&N);

printf("first %d terms of Fibonacci series:\n",N);

fibonnaci\_series(N);

return 0;

}

void fibonnaci\_series(int n)

{

int i,d1=0,d2=1,d3;

printf("%d %d ",d1,d2);

for(i=1; i<n-1; i++)

{

d3=d1+d2;

printf("%d ",d3);

d1=d2;

d2=d3;

}

}

***9.Write a program in C to find the square of any number using the function.***

#include<stdio.h>

void square(int);

int main()

{

int N;

printf("Enter a number:");

scanf("%d",&N);

square(N);

return 0;

}

void square(int n)

{

int ans;

ans=n\*n;

printf("%d is square of %d",ans,n);

}

***10. Write a program in C to find the sum of the series 1! /1+2!/2+3!/3+4!/4+5!/5 using the Function.***

#include<stdio.h>

int fact(int);

int main()

{

int N,sum=0,i;

char ch='/';

printf("enter a number:");

scanf("%d",&N);

for(i=1; i<=N; i++)

sum=sum+fact(i)/i;

printf("sum of the following series:\n");

for(i=1; i<=N; i++)

{

printf("%d!%c%d",i,ch,i);

if(i==N)

break;

printf("+");

}

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

return 0;

}

int fact(int n)

{

int f=1;

while(n)

{

f=f\*n;

n--;

}

return f;

}