**Assignment-11**

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

Ans-#include <stdio.h>

int LCM(int x,int y)

{

int i;

for(i=2;i<=x\*y;i++)

{

if(i%x==0 && i%y==0)

return i;

}

}

int main()

{

int n,m;

printf("enter two number");

scanf("%d%d",&n,&m);

printf("LCM of %d and %d is %d",n,m,LCM(n,m));

return 0;

}

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

Ans-#include <stdio.h>

int LCM(int x,int y)

{

int i;

for(i=2;i<=x\*y;i++)

{

if(i%x==0 && i%y==0)

return i;

}

}

int HCF(int x,int y)

{

int temp;

if(x<y)

{

temp=x;

x=y;

y=temp;

}

while(x!=0)

{

if(x<y)

{

temp=x;

x=y;

y=temp;

}

if(x%y==0)

return y;

x=x%y;

}

}

int main()

{

int n,m;

printf("enter two number");

scanf("%d%d",&n,&m);

printf("HCF of %d and %d is %d",n,m,HCF(n,m));

return 0;

}

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

Ans-#include <stdio.h>

int prime(int x)

{

int i;

for(i=2;i<=x/2;i++)

{

if(x%i==0)

break;

}

if(i==(x/2+1))

return 1;

else

return 0;

}

int main()

{

int n,m;

printf("enter a number");

scanf("%d",&n);

if(prime(n))

printf("%d is prime",n);

else

printf("%d is not prime",n);

return 0;

}

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

Ans-#include <stdio.h>

int prime(int x)

{

int i;

for(;;x++)

{

for(i=2;i<=x/2;i++)

{

if(x%i==0)

break;

}

if(i==(x/2+1))

return x;

else

continue;

}

}

int main()

{

int n,m;

printf("enter a number");

scanf("%d",&n);

printf("%d is prime",prime(n+1));

return 0;

}

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

Ans-#include <stdio.h>

void prime(int a)

{

int i,x=1,temp,count=0;

while(count<a)

{

for(i=2;i<=x/2;i++)

{

if(x%i==0)

break;

}

if(i==(x/2+1))

{

count++;

printf("%d ",x);

}

x++;

}

}

int main()

{

int n,m;

printf("enter a number: ");

scanf("%d",&n);

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

prime(n);

return 0;

}

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

Ans--#include <stdio.h>

void prime(int a,int b)

{

int i,x,temp;

if(a>b)

{

temp=b;

b=a;

a=temp;

}

for(x=a+1;x<b;x++)

{

for(i=2;i<=x/2;i++)

{

if(x%i==0)

break;

}

if(i==(x/2+1))

printf("%d ",x);

}

}

int main()

{

int n,m;

printf("enter two number");

scanf("%d%d",&n,&m);

prime(n,m);

return 0;

}

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

Ans-#include <stdio.h>

void fibo(int n)

{

int a=-1,b=1,c,i;

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

{

c=a+b;

printf("%d ",c);

a=b;

b=c;

}

}

int main()

{

int n;

printf("enter N value");

scanf("%d",&n);

fibo(n);

return 0;

}

8. Write a function to print PASCAL Triangle. (TSRN)

Ans-#include <stdio.h>

int comb(int n,int r)

{

int x;

return fact(n)/(fact(r)\*fact(n-r));

}

int fact(int x)

{

int i,fact=1;

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

{

fact=fact\*i;

}

return fact;

}

void pascal(int x)

{

int i,j,k=0,l;

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

{

l=0;

for(j=1;j<=(x+4);j++)

{

if((j>=(x+1)-i&&j<=(x-1)+i)&&k)

{

printf(" %d ",comb(i-1,l));

l++;

k=0;

}

else

{

printf(" ");

k=1;

}

}

printf("\n");

}

}

int main()

{

int n;

printf("enter a number");

scanf("%d",&n);

pascal(n);

return 0;

}

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

Ans-#include <stdio.h>

int square(int n)

{

return n\*n;

}

int main()

{

int n;

printf("enter a number");

scanf("%d",&n);

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

return 0;

}

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.

Ans-#include <stdio.h>

int fact(int x)

{

int i,fact=1;

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

{

fact=fact\*i;

}

return fact;

}

int series(int n)

{

int sum=0,i;

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

{

sum=sum+(fact(i)/i);

}

return sum;

}

int main()

{

int n;

printf("enter a number");

scanf("%d",&n);

printf("sumation of the series is %d",series(n));

return 0;

}