

Assignment=11

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

```
#include <stdio.h>
int lcm(int,int);
int main()
{
    int x,y;
    printf("\nEnter Two Number : ");
    scanf("%d%d",&x,&y);
    printf("LCM of two number is %d",lcm(x,y));
    return 0;
}
int lcm(int a,int b)
{
    int i;
    for(i=1;i<=a*b;i++)
    {
        if(i%a==0 && i%b==0)
            return i;
    }
}
```

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

```
#include <stdio.h>
int hcf(int,int);
int main()
{
    int x,y,i=1;
    printf("\nEnter Two Number : ");
    scanf("%d%d",&x,&y);
    printf("HCF of two number is %d",hcf(x,y));
    return 0;
}
int hcf(int a,int b)
{
    int i;
    for(i=a>b?a:b;i>=1;i--)
    {
        if(a%i==0 && b%i==0)
            return i;
        break;
    }
}
```

```
}
```

3. write a program to find a given Number is Prime or Not (TSRS)

```
#include <stdio.h>
int prime(int);
int main()
{
    int x,s;
    while(1)
    {
        printf("\n\n*****");
        printf("\nEnter The Number : ");
        scanf("%d",&x);
        s=prime(x);
        if(s==1)
            printf("\nPrime Number");
        else
            printf("\nNot a Prime Number");
    }
    return 0;
}
int prime(int a)
{
    int i;
    for(i=2;i<=a-1;i++)
    {
        if(a%i==0)
            break;
    }
    if(i==a)
        return 1;
    else
        return 0;
}
```

4.write a function to find the next prime number of a given number. (TSRS)

```
#include <stdio.h>
int prime(int);
int main()
{
    int x,s;
    while(1)
    {
```

```

printf("\n\n*****")
;
    printf("\nEnter the Number : ");
    scanf("%d",&x);
    s=prime(x);
    printf("\nThe Next prime Number is %d",s);
}
return 0;
}
int prime(int a)
{
    a++;
    int i,x,j;
    for(i=a;i<=2*a;)
    {
        for(j=i,x=2;j>x;x++)
        {
            if(j%x==0)
            {
                i++;
                break;
            }
        }
        if(j==x)
            return x;
    }
}
}

```

5. write a program to find prime number B/W two given Numbers (TSRN)

```

#include <stdio.h>
void prime(int,int);
int main()
{
    int x,y,s;
    while(1)
    {

printf("\n\n*****");
        printf("\nEnter Two Number : ");
        scanf("%d%d",&x,&y);
        prime(x,y);
    }
    return 0;
}

```

```

void prime(int a,int b)
{
    int k,i,j;
    for(i=a;i<=b;i++)
    {
        for(j=2;j<=i;j++)
        {
            if(i%j==0)
            {
                break;
            }
        }
        if(j==i)
            printf("\n %d ",j);
    }
}

```

6. Write a Function to print first N terms of Fibonacci series (TSRN).

```

#include <stdio.h>
void fib(int);
int main()
{
    int x;
    while(1)
    {

printf("\n\n*****");

        printf("\nEnter the Number for find series : ");
        scanf("%d",&x);
        fib(x);
    }
    return 0;
}
void fib(int a)
{
    int x=-1,y=1,i,k;
    for(i=1;i<=a;i++)
    {
        k=x+y;
        printf("%d ",k);
        x=y;
        y=k;
    }
}

```

7. Write a program in c to find a square of given Number.

```

#include <stdio.h>
int square(int);
int main()
{
    int x,s;
    while(1)
    {

printf("\n\n*****");
    );
        printf("\nEnter the Number : ");
        scanf("%d",&x);
        s=square(x);
        printf("\nSquare of %d is %d",x,s);
    }
    return 0;
}
int square(int a)
{
    return a*a;
}

```

8. Write a function to print first N prime Number (TSRN)

```

#include <stdio.h>
void prime(int);
int main()
{
    int x;
    while(1)
    {

printf("\n\n*****");
        printf("\nEnter Number : ");
        scanf("%d",&x);
        prime(x);
    }
    return 0;
}
void prime(int a)
{
    int i,j,x=1;
    for(i=a;i>=1;)
    {
        for(j=2,x+=1;j<=x;j++)
        {
            if(x%j==0)

```

```

        {
            break;
        }
    }
    if(j==x)
    {
        printf("\n %d ",j);
        i--;
    }
}
}
}

```

9. write a program 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 series();
int main()
{
    printf("the sum of the series is :");
    printf("%d",series());
}
int fact(int x)
{
    int i,sum=1;
    for(i=1;i<=x;i++)
    {
        sum=sum*i;
    }
    return sum;
}
int series()
{
    int x=0,i;
    for(i=1;i<=5;i++)
    x=x+ fact(i) /(i);
    return x;
}

```

10. write a function to print PASCAL triangle (TSRN)

```

#include <stdio.h>
void pascal(int);
int fact(int);
int comb(int,int);
int main()

```

```

{
    int x;
    printf("\nEnter The Number : ");
    scanf("%d",&x);
    pascal(x);
    return 0;
}
int fact(int x)
{
    int i,sum=1;
    for(i=1;i<=x;i++)
    {
        sum=sum*i;
    }
    return sum;
}
int comb(int x,int y)
{
    int s;
    s=fact(x)/(fact(x-y)*fact(y));
    return s;
}
void pascal(int a)
{
    int i,j;
    for(i=0;i<=a;i++)
    {
        for(j=0;j<=a-i;j++)
            printf(" ");

        for(j=0;j<=i;j++)
        {
            printf("%3d",comb(i,j));
        }
        printf("\n");
    }
}

```