

Assignment 11

More on functions in C Language

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

```
#include <stdio.h>
int lcm;
int lcmofnum(int n1,int n2){
    //int lcm;
    //int j = n1>n2?n1:n2;
    int i;

    for(i=(n1>n2)?n1:n2;i<n1*n2;i++){
        if(i%n1==0 && i%n2==0){
            break;
        }
    }

    return i;
}

int main()
{
    int n1,n2;
    printf("enter two numbers:");
    scanf("%d%d",&n1,&n2);

    printf("%d",lcmofnum(n1,n2));

    return 0;
}
```

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

```
#include <stdio.h>
int lcm;
int hcfofnum(int n1,int n2){

    int i;

    for(i=(n1<n2)?n1:n2;i>=1;i--){
```

```

        if(n1%i==0 && n2%i==0){
            break;
        }
    }

    return i;
}

int main()
{
    int n1,n2;
    printf("enter two numbers:");
    scanf("%d%d",&n1,&n2);

    printf("%d",hcfnum(n1,n2));

    return 0;
}

```

Que : 3 Write a function to check whether a given number is Prime or not. (TSRS)

```

#include <stdio.h>
int isprime(int n){
    int flag =0;
    int I ;

    for( I =2 ;i<n;i++){
        if(n%i==0){
            printf("non prime number");
            break;
        }
    }
    if(I == n)
        printf("number is prime ");

    return 0;
}

int main()

```

```

{
    int n1;
    printf("enter a number:");

    scanf("%d",&n1);
    isprime(n1);

    return 0;
}

```

Que: 4 Write a function to find the next prime number of a given number. (TSRS)

```

#include <stdio.h>

void nextPrimePrint(int n){
    int flag=0;
    int i ,j;

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

        for(j = 2; j< i ; j++){
            if(i%j == 0)
                break;

        }

        if(i==j)
            break;
    }

    printf("the next prime number is %d",i);
}

int main()
{
    int a;
    printf("enter number :");
    scanf("%d",&a);

    nextPrimePrint(a);

    return 0;
}

```

Que : 5 Write a function to print first N prime numbers (TSRN)

```
#include <stdio.h>

void isPrime(int n){

    int i,j;
    for(j = 2;j<=n;j++){
        for( i =2;i<=j;i++){
            if(n%i==0){
                break;
            }

            if(j == i){
                printf("%d ",j);
            }
        }
    }
}

int main()
{
    int n;
    printf("enter value of n");
    scanf("%d",&n);
    isPrime(n);

    return 0;
}
```

Que : 6 Write a function to print all Prime numbers between two given numbers.

```
#include <stdio.h>

void PrimePrint(int a, int b){
    int flag;
    for(int i = a; i<=b; i++){
        if (i == 1 || i == 0)
            continue;
        flag = 0;

        for(int j = 2; j<=i ; j++){
            if(i%j == 0)
                flag =1;
            break;
        }

        if(flag == 0)
            printf("%d",i);

    }

}

int main()
{
    int a,b;
    printf("enter two numbers :");
    scanf("%d%d",&a,&b);

    PrimePrint(a,b);

    return 0;
}
```

Que: 7 Write a function to print first N terms of Fibonacci series

```
#include <stdio.h>

void print(int n){

    int n1 =0;
    int n2 =1;
    int n3;

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

        n3=n1+n2;
        n1=n2;
        n2=n3;
        printf("%d",n3);
    }

}

int main()
{
    int n;
    printf("enter value of n");
    scanf("%d",&n);
    printf("%d%d",0,1);
    print(n-2);
    return 0;
}
```

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

```
#include <stdio.h>
```

```

int factorial(int n) {
    int f;

    for(f = 1; n > 1; n--)
        f *= n;

    return f;
}

int ncr(int n,int r) {
    return factorial(n) / ( factorial(n-r) * factorial(r) );
}

int main() {
    int n, i, j;

    n = 5;

    for(i = 0; i <= n; i++) {
        for(j = 0; j <= n-i; j++)
            printf(" ");

        for(j = 0; j <= i; j++)
            printf(" %3d", ncr(i, j));

        printf("\n");
    }
    return 0;
}

```

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

```

#include <stdio.h>
#include<math.h>

int square(int n){

    return n*n;
}

```

```

int main()
{
    int n;
    printf("enter a number : ");
    scanf("%d",&n);
    printf("%d",square(n));

    return 0;
}

```

Que : 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>
#include<math.h>

double sum(int n){

    double res = 0;
    double factorial =1;
    for(int i=1;i<=n;i++){

        factorial= factorial*i;
        res = res + (i/factorial);
    }
    return res;
}

int main()
{
    double n;
    printf("enter a number : ");
    scanf("%lf",&n);

    printf("%lf",sum(n));

    return 0;
}

```