

Assignment - 7

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

```
#include<stdio.h>
int main()
{
    int i, n , t1 = 0, t2 = 1, nextterm;
    printf("Enter Nth term: ");
    scanf("%d", &n);
    for ( i = 0; i < n; i++)
    {
        nextterm = t1 + t2;
        t1 = t2;
        t2 = nextterm;
    }
    printf("\nNth term is :%d",nextterm);
}
```

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

```
#include<stdio.h>
int main()
{
    int i, n , t1 = 0, t2 = 1, nextterm;
    printf("Enter Nth term: ");
    scanf("%d", &n);
    for ( i = 0; i < n; i++)
    {
        nextterm = t1 + t2;
        t1 = t2;
        t2 = nextterm;
        printf("\n%d",nextterm);
    }
}
```

3. Write a program to check whether a given number is there in the Fibonacci series or not.

```
#include<stdio.h>
int main()
{
    int i, t1 = 0, t2 = 1, Fibonnaci, nextterm;
    printf("Enter Number: ");
    scanf("%d", &Fibonnaci);
    for (i = 0; i < Fibonnaci; i++)
    {
        nextterm = t1 + t2;
        t1 = t2;
        t2 = nextterm;
        if (Fibonnaci == nextterm)
        {
            printf("\nFibonacci number");
            break;
        }
    }
    if (Fibonnaci != nextterm)
    {
        printf("\nNot a Fibonacci number");
    }
}
```

4. Write a program to calculate HCF of two numbers

```
#include<stdio.h>
int main()
{
    int n1, n2, lcm, hcf, i;
    printf("\nEnter two Number: ");
    scanf("%d %d", &n1, &n2);
    for (i = 1; i < n1*n2; i++)
    {
        if (i%n1==0 && i%n2==0)
        {
            lcm = i;
```

```

        break;
    }
}

hcf = n1 * n2 / lcm;
printf("\nHcf of two numbers 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 i, n1 = 2, n2 = 4,hcf;
    for ( i = 1; i <= n1; i++)
    {
        if (n1%i==0 && n2%i==0)
        {
            hcf = i;
        }
    }
    if (hcf == 1)
    {
        printf("Co prime Numbers");
    }
    else
    {
        printf("Not a co-prime numbers");
    }
}

```

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

```

#include<stdio.h>
int main()
{
    int j,i, n,count;
    for ( j = 1; j <= 100; j++)

```

```

{
    count = 0;
    for ( i = 2; i <= j; i++ )
    {
        if (j%i==0)
        {
            count++;
        }
    }
    if (count ==1)
    {
        printf("\t%d",j);
    }
}
}

```

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

```

#include<stdio.h>
int main()
{
    int j,i, n1=10, n2=95,count;
    for ( j = n1; j <= n2; j++)
    {
        count = 0;
        for ( i = 2; i <= j; i++ )
        {
            if (j%i==0)
            {
                count++;
            }
        }
        if (count ==1)
        {
            printf("\t%d",j);
        }
    }
}

```

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

```
#include<stdio.h>
int main()
{
    int j,i, n = 3, count;
    for ( j = n+1; j <= n+10; j++)
    {
        count = 0;
        for ( i = 2; i <= j; i++ )
        {
            if (j%i==0)
            {
                count++;
            }
        }
        if (count ==1)
        {
            printf("\t%d",j);
            break;
        }
    }
}
```

9. Write a program to check whether a given number is an Armstrong number or not

```
#include<stdio.h>
int main()
{
    int n =372 , t1, t2=0, temp;
    temp = n;
    while (n>0)
    {
        t1 = n%10;
        n = n/10;
        t2 = t2 + t1*t1*t1;
    }
}
```

```

if (t2==temp)
{
    printf("Armstrong Num");
}
else
{
    printf("Not an Armstrong Num");
}
}

```

10. Write a program to print all Armstrong numbers under 1000

```

#include<stdio.h>
int main()
{
    int n, t1, t2=0, temp, i;
    for ( i = 0; i < 1000; i++)
    {
        t2 =0;
        n = i;
        temp = n;
        while (n>0)
        {
            t1 = n%10;
            n = n/10;
            t2 = t2 + t1*t1*t1;
        }
        if (t2==temp)
        {
            printf("%d\t",t2);
        }
    }
}

```