

Assignment 7

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

```
#include<stdio.h>
int main()
{
    int n, a=0, b=1,i,temp=0;
    printf("Enter the term of fibonacci series ");
    scanf("%d",&n);
    for (i = 1; i < n-1; i++)
    {
        temp = b;
        b = a+b;
        a = temp;
    }
    printf("%d ",b);
}
```

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

```
#include<stdio.h>
int main()
{
    int n, a=0, b=1,i,temp;
    printf("Enter the term of fibonacci series ");
    scanf("%d",&n);
    printf("fibonacci series is: %d %d ",a,b);
    for (i = 1; i < n-1; i++)
    {
        temp = b;
        b = a+b;
        a = temp;
        printf("%d ",b);
    }
}
```

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

```
#include<stdio.h>
int main()
{
    int n, a=0, b=1,i,temp;
    printf("Enter the term of fibonacci series ");
    scanf("%d",&n);
    if (n==0)
    {
        printf("Number found ");
    }
    for (i = 1; i <= n ; i++)
```

```

{
    temp = b;
    b = a+b;
    a = temp;
    if (b==n)
    {
        printf("Number found ");
        break;
    }
    if(b>n)
    {
        printf("Number not found");
        break;
    }
}
}
}

```

4. Write a program to calculate HCF of two numbers

```

#include<stdio.h>
int main()
{
    int a, b, i, hcf;
    printf("Enter the numbers ");
    scanf("%d%d",&a, &b);
    for(i=1; i<=a*b; i++)
    {
        if((i%a==0) && (i%b==0))
        {
            break;
        }
    }
    hcf = (a*b)/i;
    printf("HCF 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 a, b, i, hcf;
    printf("Enter the numbers ");
    scanf("%d%d",&a, &b);
    for(i=1; i<=a*b; i++)
    {
        if((i%a==0) && (i%b==0))
        {
            break;
        }
    }
    hcf = (a*b)/i;
}

```

```

if (hcf == 1)
{
    printf("Numbers are co-prime ");
}
else
{
    printf("Numbers are not co-prime ");
}
}

```

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

```

#include<stdio.h>
int main()
{
    int n=100, i, j, count=0;
    for (i = 1; i < 100; i++)
    {
        count=0;
        for (j=2; j < i; j++)
        {
            if(i%j==0)
                count++;
        }
        if (count==0)
        {
            printf("\n%d is Prime",i);
        }
    }
}

```

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

```

#include<stdio.h>
int main()
{
    int a, b, i, j, count=0;
    printf("Enter the numbers ");
    scanf("%d%d",&a,&b);
    printf("Prime numbers between %d and %d:-",a,b);
    for (i = a; i<=b; i++)
    {
        for (j=2; j < i; j++)
        {
            if(i%j==0)
                count=1;
        }
        if (count==0)
        {
            printf("\n%d is Prime",i);
        }
    }
}

```

```

        else
        {
            count=0;
        }
    }
}

```

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

```

#include<stdio.h>
int main()
{
    int n, i, j, count=0;
    printf("Enter a number");
    scanf("%d",&n);
    for (i = n; 1; i++)
    {
        count=0;
        for (j=2; j <i; j++)
        {
            if(i%j==0)
                count++;
        }
        if (count==0)
        {
            printf("%d is next Prime number ",i);
            break;
        }
    }
}

```

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

```

#include<stdio.h>
int main()
{
    int n = 407, r, s=0;
    int m = n;
    while (n>0)
    {
        r = n%10;
        s = s+r*r*r;
        n=n/10;
    }
    if (m==s)
    {
        printf("Arm-strong number");
    }
    else
    {
        printf("Not arm_strong number");
    }
}

```

```
}  
}
```

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

```
#include<stdio.h>  
#include<math.h>  
int main()  
{  
    int i,m,n,rem,count,a;  
    printf("All armstrong number under 1000:- ");  
    for (i = 1; i <=1000; i++)  
    {  
        n=i,a=0,count=0;  
        while(n)  
        {  
            count++;  
            n=n/10;  
        }  
        m=i;  
        while(m)  
        {  
            rem = m%10;  
            a = a+pow(rem, count);  
            m=m/10;  
        }  
        if(i==a)  
            printf("\n%d is armstrong number ",i);  
    }  
}
```