Assignment=7

1.Write a program to Find The Nth Term of The Fibonacci Series.

```
#include <stdio.h>
int main()
{
        int a=-1,b=1,k,i;
        for(i=1;i<=9;i++)
        {
                k= a+b;
                a=b;
                b=k;
        }
        printf("Nth value of Fibonacci Series is %d",k);
}
```

2. Write a Program To Print First N Terms Of Fibonacci Series.

```
#include <stdio.h>
int main()
{
        int x,i,a=-1,b=1,k;
        printf("Enter The Number :");
        scanf("%d",&x);
        for(i=1;i<=x;i++)
        {
                k= a+b;
                a=b;
                b=k;
        printf("%d ",k);
        }
}
```

3.Write a Program To Find A Given Number is Fibonacci Series Or Not.

```
#include <stdio.h>
int main()
{
        int x,i,a=-1,b=1,k;
        printf("Enter The Number ");
```

```
        scanf("%d",&x);
        for(i=1;i<=2*x;i++)
        {
                k=a+b;
                a=b;
                b=k;
           if(k==x)
                {
                        printf("Fibonacci Series Number");
                        break;
                }
        }
   if(k!=x)
        printf("Not a fibonacci series Number");
}
```

4. write a program to calculate HCF of two numbers.

```
#include <stdio.h>
int main()
{
        int x,y,i;
        printf("Enter Two Number ");
        scanf("%d%d",&x,&y);
        for(i=x>y?x:y;i>=1;i--)
        {
                if(x%i==0 && y%i==0)
                {
                printf("HCF is %d",i);
                break;
        }
}
}
```

5. Write a program to check whether a given number is Co-Prime or not.

```
#include <stdio.h>
int main()
{
        int x,y,i;
        printf("Enter The Two Number : ");
        scanf("%d%d",&x,&y);
        for(i=x>y?x:y;i>=2;i--)
```

```
        {
                if(x%i==0 && y%i==0)
                {
                        printf("not a co-prime number");
                        break;
                }
        }
        if(i==1)
        printf("co-prime number");

}
```

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

```
#include <stdio.h>
int main()
{
        int i,j;
        printf("The All prime Number Under 100 are : ");
        for(i=1;i<=99;i++)
        {
                for(j=2;j<=i;j++)
                {
                        if(i%j==0)
                        break;
                }
        if(j==i)
        printf("%d ",j);
        }
}
```

7.write a program to print all prime numbers b/w two numbers.

```
#include <stdio.h>
int main()
{
        int x,y,i,j;
        printf("Enter The Number : ");
        scanf("%d%d",&x,&y);
   for(i=x;i<=y;i++)
        {
          for(j=2;j<=i;j++)
          {
```

```
            if(i%j==0)
            {
              break;
            }
          }
           if(i==j)
            printf("%d ",j);
        }
}
```

8.write a program to find the next number of a given number.

```
#include <stdio.h>
int main()
{
        int x,i,j;
        printf("Enter the number");
        scanf("%d",&x);
        for(i=x+1;i<=2*x;i++)
        {
        for(j=2;j<=i;j++)
        {
                if(i%j==0)
                {
                  break;
           }
        }
        if(i==j)
        {
        printf("%d",i);
        break;
}
}
}
```

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

```
#include <stdio.h>
int main()
{
        int x,z,i,k,n=0;
        printf("Enter The Number : ");
```

```
        scanf("%d",&x);
        k=x;
        for(i=k;i<=k;i++)
        {
           z=0;
           while(k)
          {
                n=k%10;
                z=z+n*n*n;
                k=k/10;
          }
          if(z==x)
          {
          printf("%d is a armstrong NUmber",z);
          break;
          }
          else
          {
          printf("Not a armstrong Number");
          break;
    }
}
}
```

10. Write a Program to Print all Armstrong Numbers Under 100.

```
#include <stdio.h>
int main()
{
        int x,k,s,i;
        printf("Armstrong Number are : ");
        for(i=1;i<=1000;i++)
        {
                s=0;
                x=i;
                while(x)
                {
                        k=x%10;
                        s=s+k*k*k;
                        x=x/10;
                }
                if(s==i)
                printf("%d ",i);
```

```
        }
    }
```