Assignment no.4

1.//program to print armstrong number in given range using for loop

```
#include<stdio.h>
#include<math.h>
int main()
{
	int start,end;
	printf("Enter the start and end range= ");
	scanf("%d %d",&start,&end);

	for(int num=start;num<=end;num++)
	{
		int originalNum=num;
		int sum=0;
		int numDigits=0;
		int tempNum=num;

		while(tempNum>0)
		{
			tempNum/=10;
			numDigits++;
		}
		tempNum=num;
		while(tempNum>0)
		{
			int digit=tempNum%10;
			sum+=pow(digit,numDigits);
```

```
                tempNum/=10;
        }
        if(sum==originalNum)
        {
                printf("%d",originalNum);
        }
    }
    printf("\n");
    return 0;

}
```

2. //program to printf prime number

```
#include<stdio.h>
int main()
{
        int n,i,temp,flag=0;
        int num=20;
        printf("Enter number which you want= ");
        scanf("%d",&num);
        temp=num;

        for(i=2;i<=20;i++)
   {
                if(num%2==0)
                flag==1;
                 printf("The number is not prime=%d \n",i);
                 break;

                 }
                 if(flag==0)
                   printf("The %d number is prime\n");

         }
```

3. //program to print perfect number in given range

```
#include<stdio.h>
int main()
{
        int i=1,sum=0,num;
        printf("Enter number which you want= ");
        scanf("%d",&num);

         for(i=1;i<num;i++)
   {
           if(num%i==0)
            sum+=i;

   }
    if(sum==num)
    {
      printf("The %d is perfect number\n",num);
    }
   else
    {
            printf("The %d is not perfect number\n",num);
   }
   return 0;
    }
```

4. //program to print number is strong or not using given range

```
#include<stdio.h>
int factorial(int n)
{
        int fact=1;
        for(int i=1;i<=n;i++)
        {

         fact*= i;
}
}
int main()
 {
        int num,original,sum=0,digit;
        printf("Enter  a number=");
        scanf("%d",&num);
        original=num;
        while(num>0)
        {
          digit=num%10;
         sum+= factorial(digit);
         num/=10;
 }

 if(sum==original)
   printf("%d is a strong number\n",original);
 else
   printf("%d is not a strong number\n",original)
return 0; }
```

5. //program to print fibonacci series upto n terms

```
#include<stdio.h>
int main()
{
        int i,n,t1=0,t2=1,nextTerm;
        printf("Enter number of terms:");
        scanf("%d",&n);
        printf("fibonacci series");

        for(i=1;i<=n;i++)
        {
                printf("%d",t1);
                nextTerm=t1+t2;
                t1=t2;
                t2=nextTerm;
        }
        return 0;
  }
```