Assignment 6

```
//program to print 1 to n number using pointer
#include<stdio.h>
void calculateNumber(int*,int*);
void main()
{
	int start=1;
	int end=20;
	calculateNumber(&start,&end);
}
void calculateNumber(int *ptr,int *end)
{
  for(int i=*ptr;i<*end;i++){
	printf("%d-",i);
  }
}
```

```
//program to print sum of number in the given range

#include<stdio.h>
void calculateSum(int*,int*,int*);
void main()
{
	int n,i,start,end,*sum=0;
	printf("enter start range= ");
	scanf("%d",&start);
	printf("Enetr end range= ");
```

```
	scanf("%d",&end);
	calculateSum(&start,&end,&sum);
	printf("The sum is %d to %d is : %d\n",start,end,sum);



}

void calculateSum(int *start,int *end,int *sum)
{
	int i;
 for(i=*start;i<=*end;i++)
 {
	 *sum+=i;




	 }
}//program to print table for the given number using pointer

#include<stdio.h>
void calculateTable(int*);
int main()
{
	int n;
	printf("Enter number which you want=");
	scanf("%d",&n);
	calculateTable(&n);
}
void calculateTable(int *n)
{
	 int i,j;
```

```
        for(i=1;i<=*n;i++)
        {
                printf(" %d\n",i);
        }
        for(j=1;j<=10;j++)
        {
                printf("The table is %d*%d= %d\n",i,j,i*j);
        }

}



//program to check number is primbe or not

#include<stdio.h>
#include<stdbool.h>
bool isPrime(int*);
int main()
{
   int n,i,num;
        printf("Enter number which you want: ");
        scanf("%d",&num);
        isPrime(&num);
        if(isPrime(&n))
          printf("%d is a prime number\n",num);
        else
          printf("%d is not a prime number\n",num);

}
bool isPrime(int* n)
```

```
{
        if(*n<=1)
          return false;
        for(int i=2;i<=*n/2;i++)
        {

  if(*n%i==0)
     return false;
}
return true;
}



/program to check number is armstrong or not

#include<stdio.h>
#include<math.h>
int isStrong(int*);
int main()
{
        int num,i;
        printf("Enter number which you want= ");
        scanf("%d",&num);
        if(isStrong(&num))
          printf("%d is an armstrong number.\n",num);
        else
          printf("%d is not armstrong number\n",num);
}
int isStrong(int *n)
{
```

```
   int originalnum=*n;
            int result=0,c=0,temp=*n;


            while(temp!=0)
            {
                        temp/=10;
                        c++;
            }
            temp=*n;
            while(temp!=0)
            {
                        int digit=temp%10;
                        result+=pow(digit,c);
                        temp/10;
            }
            return(result==temp);

}




//program to print number is perfect or not using pointer
#include<stdio.h>
int isperfect(int*);
int main()
 { int num;
    printf("Enter number which you want= ");
            scanf("%d",&num);
   int *s;
  *s=isperfect(&num);
  printf("%d",*s);
```

```
 }
int isperfect(int* n)
 {
    int i=1,sum=0;



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

    }
     if(sum==*n)
      return 1;
    else
     return 0;
     }


//program to find factorial of number

#include<stdio.h>
int calculateFactorial(int*);
int main()
{
            int num;
            printf("Enter numer which you want: ");
            scanf("%d",&num);
            int *s=calculateFactorial(&num);
            printf("The factorial of %d is= %llu",*s);
}
```

```
int calculateFactorial(int* n)
{
        int fact=1;
        for(int i=1;i<= *n;i++)
        {
          fact=fact*i;
        }
        return fact;
}
```

```
//program to print mimnimum and maximum number in array using pointer

#include<stdio.h>
void findMinMax(int*, int,int*,int*);
void main()
{
   int arr[10] = {23, 45, 12, 67, 34, 89, 2};
   int min, max,size;

   findMinMax(arr, size, &min, &max);

   //printf("Minimum number in the array is: %d\n", min);
   //printf("Maximum number in the array is: %d\n", max);
}

void findMinMax(int *arr, int size, int *min, int *max)
{
   *min = *max = *arr;
```

```
   for (int i = 1; i < size; i++)
            {
      if (arr[i] < *min)
                        {
         *min = *(arr + i);
         printf("Minimum number in the array is: %d\n", *min);
      }


                        if (arr[i]> *max)
                        {
         *max = *(arr + i);
          printf("Maximum number in the array is: %d\n", *max);
      }
   }
}



//program to check given number is palindrome or not

#include<stdio.h>
int ispalindrome(int*);
int main()
 {
            int num;
    printf("Enter an integer:");
            scanf("%d",&num);
  ispalindrome(&num);
}
int ispalindrome(int *no)
  {
```

```
        int reverseno=0,remainder;
        int originalno=*no;
        int temp=*no;
        while(no!=0)
        {
                remainder=temp%10;
                reverseno=reverseno*10+remainder;
                temp/=10;
        }
        if(originalno == reverseno)
          {
            printf("The %d is palindrome number\n",originalno);
    }
        else
        {
                printf("The %d is not palindrome numer\n",originalno);
        }
}
```

/Add the(first and last)digit of a given number using pointer

```
#include<stdio.h>
int sum(int*);
int main()
{
   int n;
   printf("Enter an integer:");
        scanf("%d",&n);
```

```
        int *s=sum(&n);
        printf("%d",*s);
}
int sum(int *num)
{

        int sum;
        int lastdigit=num%10;
        int firstdigit=num;

        while(firstdigit>=10)
          {
                firstdigit/=10;
          }
                sum=firstdigit+lastdigit;
                return sum;
        }
```