1. Write a C Program to find the Greatest Common Divisor using the functions.

```
#include <stdio.h>

int findGCD(int a, int b)
{

    int i, gcd;
    int smallest, greatest;
    if (a < b)
    {
        smallest = a;
        greatest = b;
    }
    else
    {
        smallest = b;
        greatest = a;
    }
    for (i = smallest; i > 0; i--)
    {
        if (greatest % i == 0 && smallest % i == 0)
        {
            gcd = i;
            break;
            /* for(i=1;i<smallest;i++){
             if(greatest%i==0 && smallest%i==0){
                 gcd =i;*/
        }
    }

    return gcd;
}

int main()
{
    int n1, n2, gcd;
    printf("enter two number  ");
    scanf("%d%d", &n1, &n2);
    gcd = findGCD(n1, n2);

    printf("%d\n", gcd);
    return 0;
}
```

```
shalu@shalu-VirtualBox:~/C_Program/Lab_Task$ ./gcd
enter two number  150 35
5
shalu@shalu-VirtualBox:~/C_Program/Lab_Task$ ./gcd
enter two number  1026 405
27
shalu@shalu-VirtualBox:~/C_Program/Lab_Task$ ./gcd
enter two number  83 240
1
shalu@shalu-VirtualBox:~/C_Program/Lab_Task$
```

2. Write a C program to find the Absolute Value using the functions.

```
#include<stdio.h>
void absolute(int n)
{
  if(n<0)
  {
   printf("the absolute value of %d is %d \n",n,n*(-
1));
  }
  else
  {
   printf("the absolute value of %d is %d\n",n,n);
  }
  return;

}
int main()
{
 int p;
 printf("Enter the number");
 scanf("%d",&p);
 absolute(p);

   return 0;

}
```

```
shalu@shalu-VirtualBox:~$ ./abs
Enter the number 100
the absolute value of 100 is 100
shalu@shalu-VirtualBox:~$ ./abs
Enter the number-200
the absolute value of -200 is 200
shalu@shalu-VirtualBox:~$
```

3. Write a C PROGRAM TO CHECK WHETHER THE GIVEN NUMBER IS PERFECT NUMBER OR NOT USING FUNCTIONS.

```
#include<stdio.h>
int perfect(int n)
{
    int i, sum=0;
   for(i=1;i<=(n/2);i++)
   {
      if(n%i==0)
      {
        sum=sum+i;
      }
    }


    return sum;

 }
int main()
{
 int a,sum1;
 printf("Enter the number");
 scanf("%d",&a);
 sum1=perfect(a);
 if(sum1==a)
    {
    printf("The number entered is Perfect Number\n");
    }
    else
    {
    printf("The number entered is not a Perfect
Number\n");
    }
   return 0;
 }
```

```
shalu@shalu-VirtualBox:~$ ./factor
Enter the number 6
The number entered is Perfect Number
shalu@shalu-VirtualBox:~$ ./factor
Enter the number 24
The number entered is not a Perfect Number
shalu@shalu-VirtualBox:~$
```

4. Write a C program to find the factorial of a given number using functions.

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

  return fact;

}
int main()
{
 int a,factor;
   printf("enter the number");
   scanf("%d",&a);
   factor=factorial(a);
   printf("The factorial of %d is %d\n",a,factor);
  return 0;
 }
```

```
shalu@shalu-VirtualBox:~/C_Program/Assignment$ ./factor
enter the number 7
The factorial of 7 is 5040
shalu@shalu-VirtualBox:~/C_Program/Assignment$ ./factor
enter the number 0
The factorial of 0 is 1
shalu@shalu-VirtualBox:~/C_Program/Assignment$
```

5. Write a C Program to find the power of a given number using functions.

```
#include<stdio.h>
int power(int b,int m)
{
   int i,value=1;
   for(i=1;i<=m;i++)
   {
     value=value*b;
   }
   return value;

}
int main()
{
int a,n,i,value1;
   printf("Enter the base number ");
   scanf("%d",&a);
   printf("Enter the power number ");
   scanf("%d",&n);
   value1=power(a,n);
   printf("%d^%d =%d\n",a,n,value1);
 return 0;
}
```

```
shalu@shalu-VirtualBox:~/C_Program/Assignment$ ./power
Enter the base number 2
Enter the power number 3
2^3 =8
shalu@shalu-VirtualBox:~/C_Program/Assignment$ ./power
Enter the base number 5
Enter the power number 0
5^0 =1
shalu@shalu-VirtualBox:~/C_Program/Assignment$
```