**C Programming and Data Structures**

**Computer Science and Technology-B**

**Week 2**

**2 a) Write a C program to list all the factorial numbers less than or equal to an input number n.**

**A number N is called a factorial number if it is the factorial of a**

**Positive integer. For example, the first few factorial numbers are**

**1, 2, 6, 24, 120, ...**

**\*Note\* - We do not list the factorial of 0.**

#include<stdio.h>

void main()

{

int n,i=1,fact=1;

printf("Enter n value:");

scanf("%d",&n);

while(fact<n)

{

printf("%d\n",fact);

i=i+1;

fact=fact\*i;

}

}

**Output:**

Enter n value:125

1

2

6

24

120

**2 b) Write a program that reads numbers which are in the range 0 to 100, till it encounters -1.**

**Print the sum of all the integers that you have read before you encountered -1**

#include<stdio.h>

void main()

{

int n=0,sum=0;

while(n!=-1)

{

if(n>=0&&n<100)

{

sum=sum+n;

printf("Enter a number between 0 and 100:");

scanf("%d",&n);

}

else

{

printf("Enter a number between 0 to 100 only\n");

n=0;

}

}

printf("Sum=%d",sum);

}

**Output:**

Enter a number between 0 and 100:10

Enter a number between 0 and 100:25

Enter a number between 0 and 100:123

Enter a number between 0 and 100 only

Enter a number between 0 and 100:43

Enter a number between 0 and 100:76

Enter a number between 0 and 100:-1

Sum=157