Green University of Bangladesh

Department of Computer Science and Engineering(CSE)

Faculty of Sciences and Engineering

Semester: (Spring, Year:2021), B.Sc. in CSE (Day)

LAB REPORT NO

Course Title: Structured Programming

Course Code: CSE lab 104 Section: DE

Lab Experiment Name: While and Do -While Loop

Student Details

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Submission Date : 20-Jul-22

Course Teacher's Name : Md. Parvez Hossain

[For Teachers use only: Don't Write Anything inside this box]

Lab Report Status

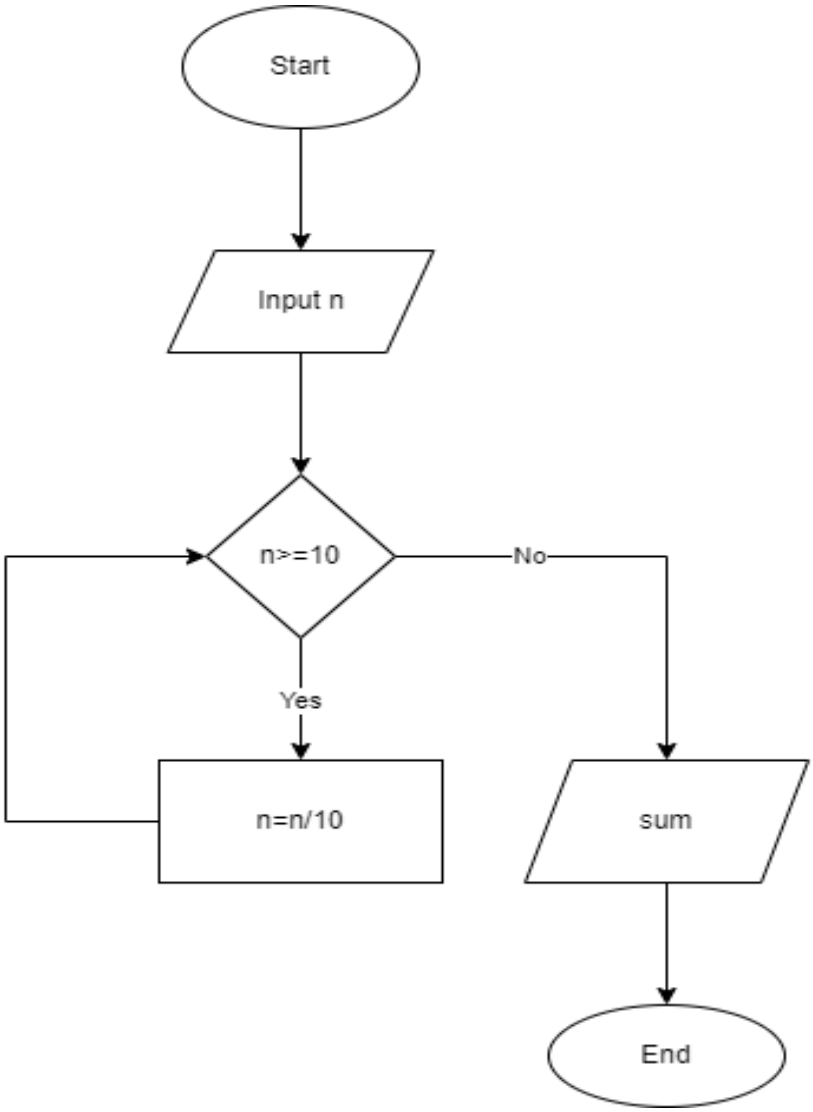
Marks: …… **Signature:.....**

Comments:..... **Date:.....**

Problem-1:

Write a C program to find sum of first and last digit of any number.

Flow Chart:



Code:

```c
#include<stdio.h>
int main()
{
    int n,sum=0,ld,fd;
    printf("Enter any number:");
    scanf("%d",&n);
    ld=n%10;
    fd=n;
    while(n>=10)
    {
        n=n/10;
    }
    fd=n;
    sum=fd+fd;
    printf("Sum of First and Last digit=%d",sum);
    return 0;
}
```

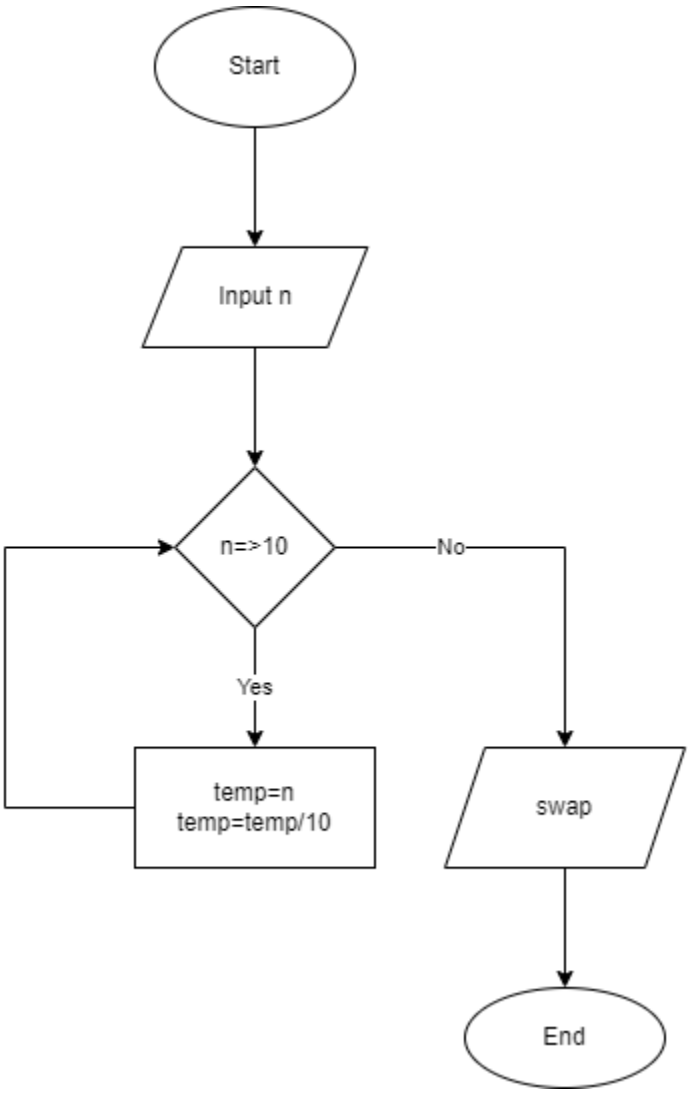
Output:

```
"C:\Users\This PC\Downloads\university books\C\4.4.1\1. Write a C program to find sum of first and last digit of any number.exe"
Enter any number:354147
Sum of First and Last digit=6
Process returned 0 (0x0)   execution time : 2.657 s
Press any key to continue.
```

Problem-2:

Write a C program to swap first and last digits of any number.

Flow chart:



Code:

*2. Write a C program to swap first and last digits of any number.c | 3. Write a C program to calculate product of digits of any number.c

```c
#include <stdio.h>
#include <stdlib.h>
#include <math.h>

int main(void)
{
    int n, last, first, temp, swap, count = 0;
    printf("Enter any number to swap: ");
    scanf("%d", &n);
    temp = n;
    last = temp % 10;
    count = (int)log10(temp);
    while(temp>=10)
    {
        temp /= 10;
    }
    first = temp;
    swap = (last * pow(10, count) + first) + (n - (first * pow(10, count) + last));
    printf("%d is swapped to %d\n", n, swap);
    return 0;
}

```

Output:

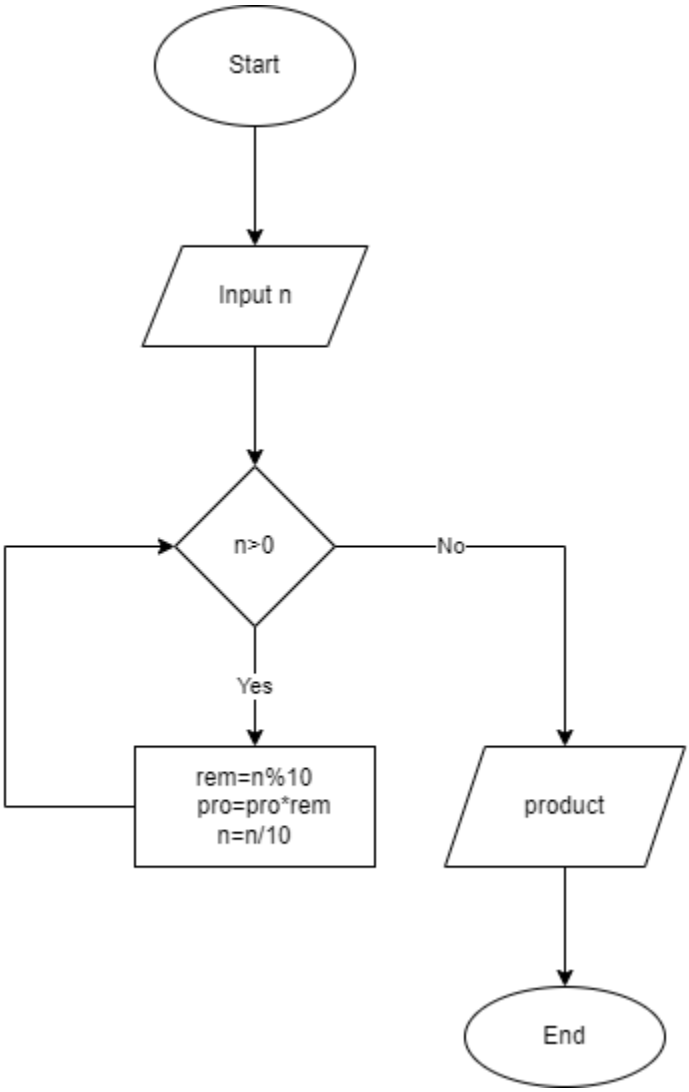
```
"C:\Users\This PC\Downloads\university books\C\4.4.1\2. Write a C program to swap first and last digits of any number.exe"
Enter any number to swap: 564789
564789 is swapped to 964785

Process returned 0 (0x0)   execution time : 8.144 s
Press any key to continue.
```

Problem-3:

Write a C program to calculate product of digits of any number.

Flow Chart:



Code:

3. Write a C program to calculate product of digits of any number.c

```c
#include<stdio.h>
int main()
{
    int n,rem,pro=1;
    printf("Enter any number:");
    scanf("%d",&n);
    while(n!=0)
    {
        rem=n%10;
        pro=pro*rem;
        n=n/10;
    }
    printf("Product of digit =%d",pro);
    return 0;
}
```

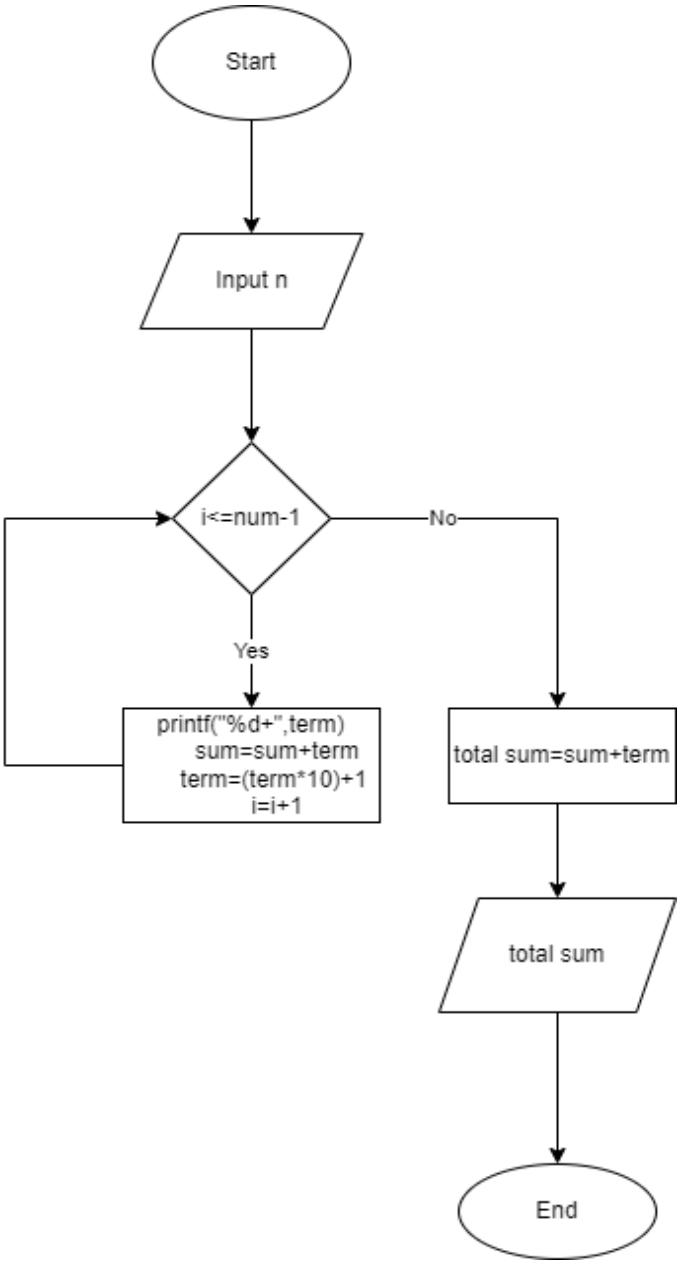
Output:

```
"C:\Users\This PC\Downloads\university books\C\4.4.1\3. Write a C program to calculate product of digits of any number.exe"
Enter any number:325
Product of digit =30
Process returned 0 (0x0)   execution time : 8.297 s
Press any key to continue.
```

Problem-4

Write a program in C to find the sum of the series 1 +11 + 111 + 1111 + .. n terms.

Flow Chart:



Code:

Write a program in C to find the sum of the series 1 +11 + 111 + 1111 + .. n terms.c

```c
#include<stdio.h>
int main()
{
    int num,i=1;
    long sum=0,tsum;
    long int term=1;
    printf("Enter the number of Term:\n");
    scanf("%d",&num);
    while(i<=num-1)
    {
        printf("%d+",term);
        sum=sum+term;
        term=(term*10)+1;
        i=i+1;
    }
    printf("%d=",term);
    tsum=sum+term;
    printf("%ld",tsum);
    return 0;
}

```

Output:

```
"C:\Users\This PC\Downloads\university books\C\4.4.1\Write a program in C to find the sum of the series 1 +11 + 111 + 1111 + .. n terms.exe"
Enter the number of Term:
4
1+11+111+1111=1234
Process returned 0 (0x0)   execution time : 3.445 s
Press any key to continue.
```