Compiler Design Lab

Paper Code: PCCCS691

Work Book

Department of Computer Science & Engineering

B. Tech

3rd year 6th Semester

Assignment No. 3

Program Name: Write a C program to test whether a given input is a floating-point number or not.

Objective: Understanding the validation of a floating point number.

Resource: Online Compiler To simulate the program and test the output Result

Program Code:

```
#include<stdio.h>

#include<string.h>


int main()

{

   char number[10];

   int flag1 = 0, flag2 = 0;

   int length, i = 0;


   printf("\n\nEnter a number: ");

   scanf("%s", number);


   length = strlen(number);




while(number[i++] != '\0')
```

```
    {
        if(number[i]>='a' && number[i]<='z' || number[i]>='A' && number[i]<='Z')
        flag1=1;

        if(number[i] == '.')
        {
            flag2 = 1;
            break;
        }
    }

    if(flag1==1 && flag2==1 || flag1==1 && flag2==0)
        printf("\n\n\n\tWrong input\n\n");

    else if(flag1==0 && flag2==1)
        printf("\n\n\n\tEntered Number is a Floating point Number\n\n");

    else
        printf("\n\n\n\tEntered Number is a integer Number\n\n");

    return 0;
}
```

Input & Output:

```
Output

/tmp/52FzkNu0eq.o
Enter a number: 40e
Wrong input
```

```
Output

/tmp/52FzkNu0eq.o
Enter a number: 40.2
Entered Number is a Floating point Number
```

```
Output

/tmp/52FzkNu0eq.o
Enter a number: 40
Entered Number is a integer Number
```