Green University of Bangladesh Department of Computer Science and Engineering(CSE)

Faculty of Sciences and Engineering Semester: (Fall , Year:2022), B.Sc. in CSE (Day)

LAB REPORT NO : 1

Course Code   : CSE 104

Course Title   : Structured Programming Lab

Section   **: DC**

Student Details

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Lab Date : 18-10-2022
Submission Date : 25-10-22
Course Teacher's Name : JARIN TASNIM TONVI

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Lab Report Status

Marks:.....   **Signature:**
Comments: **Date:**........
                                                         .

Introduction to C

C is a general-purpose structured programming language which is developed by Dennis Ritchie in Bell Labretory in 1972.It is most popular language for beginer because it is middle level language. C is developed using linux operating system but the interesting thing is that in the later time Linux kernel was developed by C language.. The advantage of C programming language is very fast than any other language.

Problem 1:

Title: Write a C Program to display your Id, Name, Dept. Name and University Name followed by a newline.

Objectives:

- To be familiar with scanf,printf, and fflush function
- Learn to solve the problem with arithmetic expressions.

Input & Output:

At first we have to read 4 data such as Id, Name, Dept. Name and University Name..Then print these value...

Implementation:
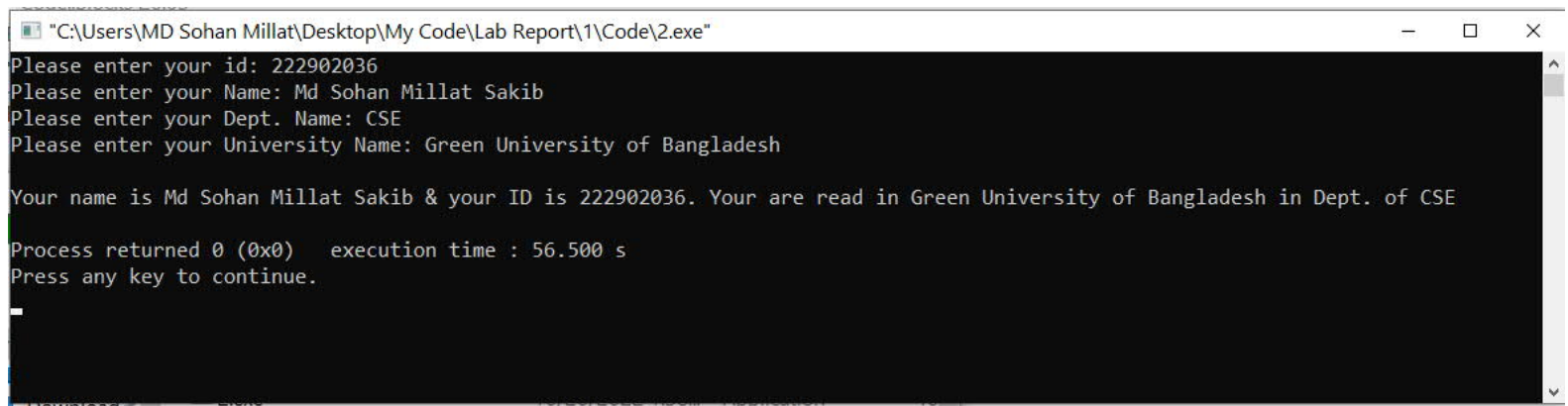
```c
/*Write a C Program to display your Id, Name, Dept. Name and
University Name followed by a newline.*/


#include <stdio.h>
#include <string.h>
int main(){
    int a;
    char b[100];
    char c[20];
    char d[100];

    printf("Please enter your id: ");
    scanf("%d",&a);
    printf("Please enter your Name: ");
    fflush(stdin);
    gets(&b);
    printf("Please enter your Dept. Name: ");
    fflush(stdin);
    gets(&c);
    printf("Please enter your University Name: ");
    fflush(stdin);
    gets(&d);
    printf("\nYour name is %s & your ID is %d. Your are read in %s in Dept. of %s\n",b,a,d,c);
}
```

Test Result:

```
"C:\Users\MD Sohan Millat\Desktop\My Code\Lab Report\1\Code\2.exe"                          —    □    ×
Please enter your id: 222902036
Please enter your Name: Md Sohan Millat Sakib
Please enter your Dept. Name: CSE
Please enter your University Name: Green University of Bangladesh

Your name is Md Sohan Millat Sakib & your ID is 222902036. Your are read in Green University of Bangladesh in Dept. of CSE

Process returned 0 (0x0)   execution time : 56.500 s
Press any key to continue.
```

Discussion: When I run the code I face a problem because of use the scanf() functin before gets() function. For solve this problem I use fflush(stdin) function for flash memory buffer.

Problem 2:

Title: Write a C program to add two numbers (5 and 8) and display its sum like (5 + 8 = 13)

Objectives:

- To be familiar with scanf,printf function & variable.
- Learn to solve the problem with arithmetic expressions.

Input & Output:

At first, we have to take 3 variables. Assign 5 on a & 8 on b. Then calculate the summission of a & b. Then print it.

Implementation:

```c
/*Write a C program to add two numbers (5 and 8)
and display its sum like (5 + 8 = 13)*/
#include <stdio.h>
int main(){
    int a=5,b=8,c;
    c=a+b;
    printf("%d + %d = %d\n",a,b,c);
    return 0;
}
```

Test Result:

Discussion: I think this is a simple problem and I didn't face any problem to solve this.

Problem 3:

Title: Write a C Program to input two numbers as input and display its product.

Objectives:

- To be familiar with scanf,printf function & variable.
- Learn to solve the problem with arithmetic expressions.
- C is a case sensitive language. So we have to remind it. All the keyword of the c programme is lower case.
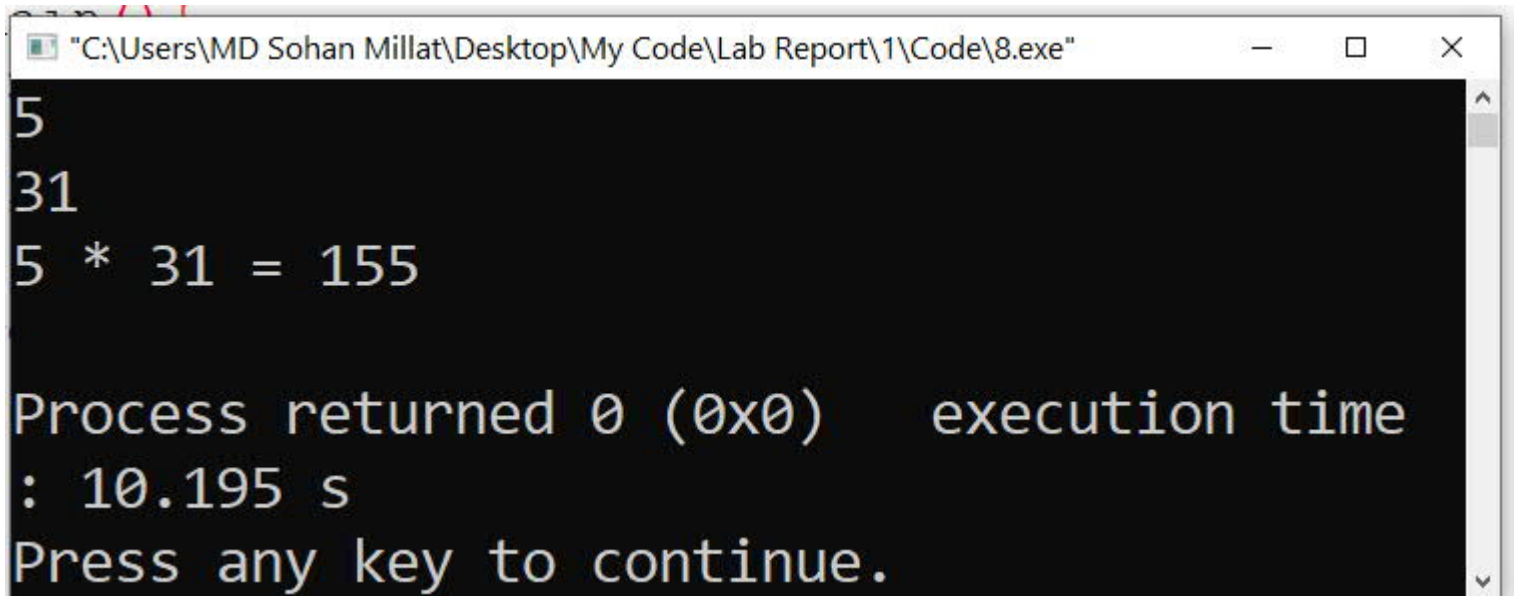
Input & Output:
At first, we have to take 3 variables. Now read two value from user. Then calculate the product of a & b. Then print it.

Implementation:

```c
/*Write a C Program to input two numbers
as input and display its product.*/
#include <stdio.h>
int main(){
    int a,b,c;
    scanf("%d %d",&a,&b);
    c=a*b;
    printf("%d * %d = %d\n",a,b,c);
    return 0;
}
```

Test Result:

```
"C:\Users\MD Sohan Millat\Desktop\My Code\Lab Report\1\Code\8.exe"                —    □    ×

5
31
5 * 31 = 155

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

Discussion: I don't face any problem to solve this....

Problem 4:

Title: Write a C Program to input two numbers as input and display its product.

Objectives:

- To be familiar with scanf,printf function & variable.
- Learn to solve the problem with arithmetic expressions.
- C is a case sensitive language. So we have to remind it. All the keyword of the c programme is lower case.

Input & Output:

At first, we have to take 3 floating point variables. Now read two value from user. Then calculate the sum of a & b. Then print it.

Implementation:

```c
/*Write a C Program to input two float
numbers as input and display its sum [Follow
the printing style of problem 5].*/
#include <stdio.h>
int main(){
    float a,b,c;
    scanf("%f %f",&a,&b);
    c=a+b;
    printf("%f + %f = %f\n",a,b,c);
    return 0;
}
```

Test Result:

```
"C:\Users\MD Sohan Millat\Desktop\My Code\Lab Report\1\Code\9.exe"                  —    □    ✕
54.3
63.21
54.299999 + 63.209999 = 117.509995

Process returned 0 (0x0)     execution time : 9.188 s
Press any key to continue.
```

Discussion: Here I face a problem. At first I input a floating point value and the value is 54.3 and in the variable store this as 54.299999. Which is not equal exactly. From Internet resource I can know that if I want to input the value accurately I have use double type variable.