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 : 2

Course Code   : CSE 104

Course Title   : Structured Programming Lab

Section   : DC

Student Details

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Lab Date : 26-10-2022

Submission Date : 01-**11**-**22**

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

Lab Report Status

Marks:.....

Comments:

Signature:

Date:........

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Problem 1:

Title: Write a C Program to Calculate Area of a Square, take length of one side as user input.

Objectives:

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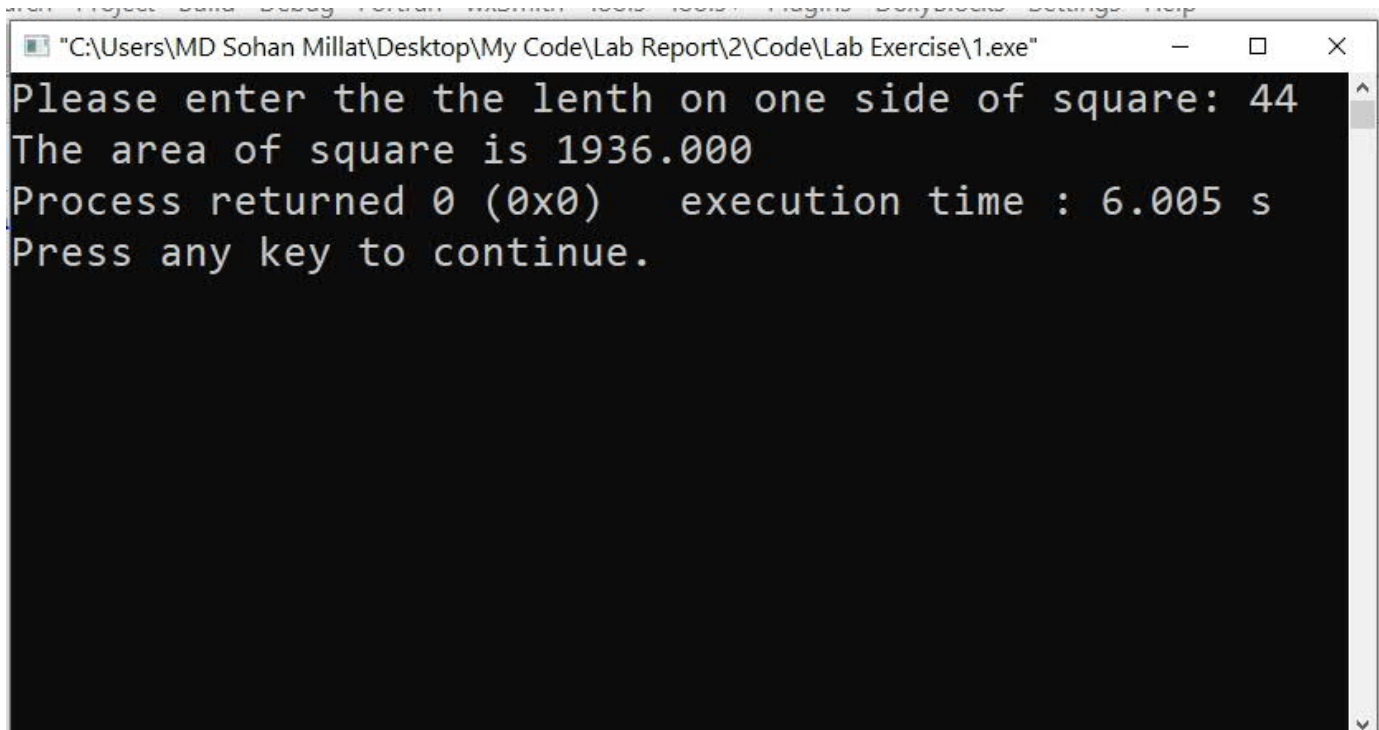- Learn to solve the problem with arithmetic expressions.

Input & Output:

At first, we have to read the length of the square. Then calculate the square length of the square and print it.

Implementation:

```c
//Write a C Program to Calculate Area of a Square, take length of one side as user input
#include <stdio.h>
int main(){
    double a,b;
    printf("Please enter the the lenth on one side of square: ");
    scanf("%lf",&a);
    b=a*a;
    printf("The area of square is %.3lf",b);
    return 0;
}
```

Test Result:


```
"C:\Users\MD Sohan Millat\Desktop\My Code\Lab Report\2\Code\Lab Exercise\1.exe"        —    □    ✕
Please enter the the lenth on one side of square: 44
The area of square is 1936.000
Process returned 0 (0x0)    execution time : 6.005 s
Press any key to continue.
```

Discussion: I don't face any problem solving this problem.

Problem 2:

Title: Write a C program to enter temperature in °Celsius and convert it into °Fahrenheit.

Objectives:

- To be familiar with scanf and printf function.
- Learn to solve the problem with arithmetic expressions.
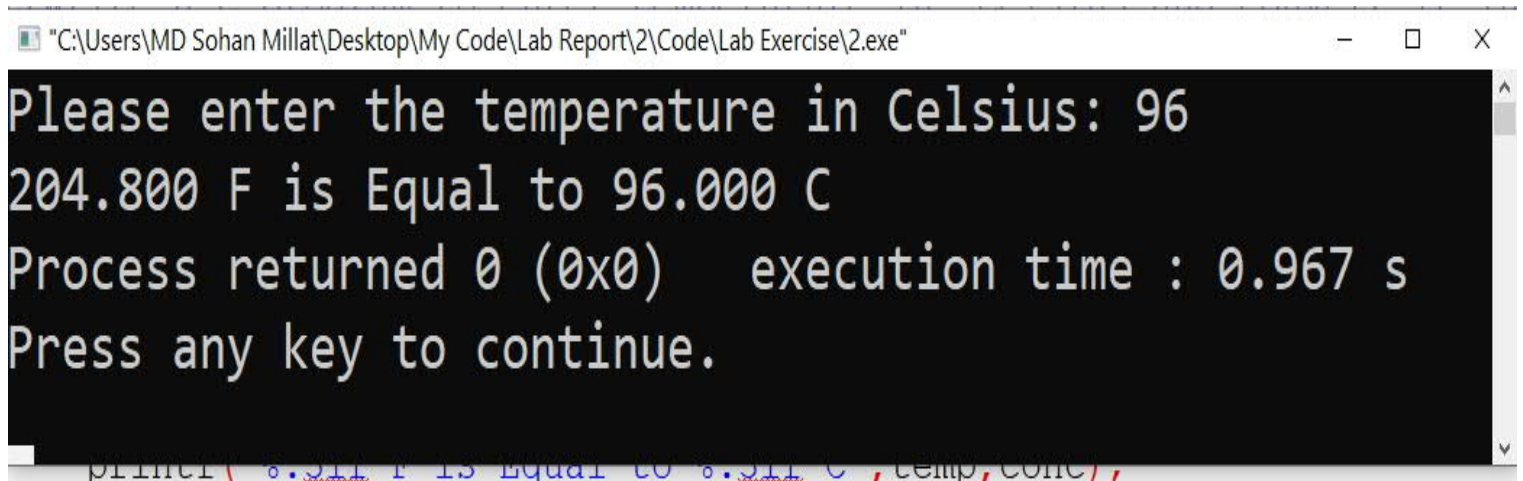- We have to know about Celcius to Farenheit law.

Input & Output:

At first, we have to read Celcius value.Then applying Celcius farenheit relation find out the Farenheit value..And print it.

Implementation:

```c
//Write a C program to enter temperature in °Celsius and convert it into °Fahrenheit
#include <stdio.h>
int main(){
    double temp;   //temp mean input temperature
    double conc;   //conc mean converted temperature
    printf("Please enter the temperature in Celsius: ");
    scanf("%lf",&conc);
    temp=(conc*((float)9/5))+32;
    printf("%.3lf F is Equal to %.3lf C",temp,conc);
    return 0;
}
```

Test Result:

```
"C:\Users\MD Sohan Millat\Desktop\My Code\Lab Report\2\Code\Lab Exercise\2.exe"                    —    □    X

Please enter the temperature in Celsius: 96
204.800 F is Equal to 96.000 C
Process returned 0 (0x0)    execution time : 0.967 s
Press any key to continue.
```

Discussion: This programme will find out the temperature value in farenheit. I don't face any problem solving this question.

Problem 3:

Title: Write a C program to enter temperature in Fahrenheit(°F) and convert it into Celsius(°C)

Objectives:

- To be familiar with scanf and printf function.
- Learn to solve the problem with arithmetic expressions.
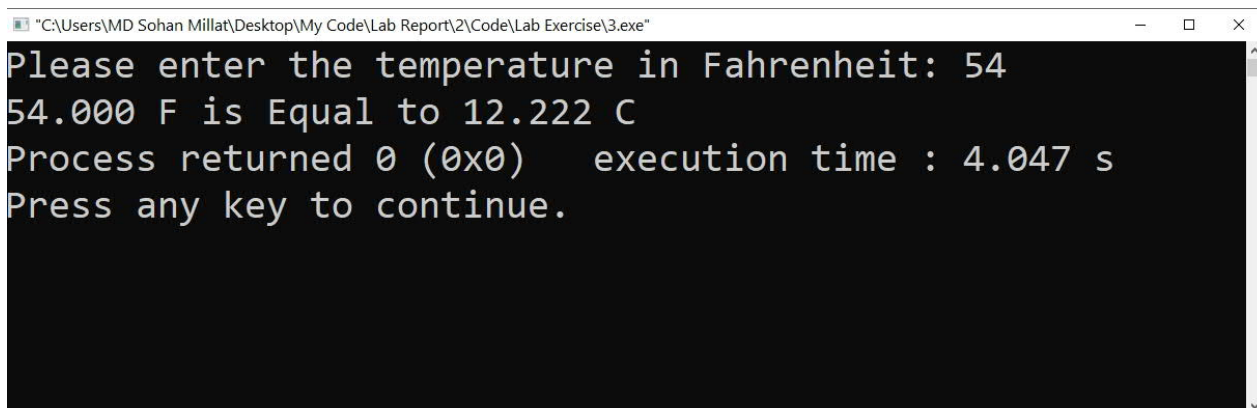- We have to know about Farenheit and Celcius relation.

Input & Output:

At first, we have to read Farenheit value. Then applying Celcius farenheit relation find out the Celcius value..And print it.

Implementation:

```c
//Write a C program to enter temperature in Fahrenheit and convert it into Celsius
#include <stdio.h>
int main(){
    double temp;    //temp mean input temperature
    double conf;    //conc mean converted temperature
    printf("Please enter the temperature in Fahrenheit: ");
    scanf("%lf",&temp);
    conf=(temp-32)*((float)5/9);
    printf("%.3lf F is Equal to %.3lf C",temp,conf);
    return 0;
}
```

Test Result:

```
"C:\Users\MD Sohan Millat\Desktop\My Code\Lab Report\2\Code\Lab Exercise\3.exe"              —  □  ×
Please enter the temperature in Fahrenheit: 54
54.000 F is Equal to 12.222 C
Process returned 0 (0x0)    execution time : 4.047 s
Press any key to continue.
```

Discussion: This programme will find out the temperature value in Celsius. I don't face any problem solving this question.

Problem 4:

Title: Write a C program to enter marks of five subjects and calculate total and average marks.

Objectives:

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

Input & Output:

At first, we have to read five value as subject number. Then it is divided by 5.And then print it.

Implementation:

```c
//Write a C program to enter marks of five subjects and calculate total and average marks.
#include <stdio.h>
int main(){
    double a[5],b=0;
    printf("Please enter the Marks of 5 subject: ");
    for(int x=0;x<=4;x++){
        scanf("%lf",&a[x]);
        b=b+a[x];
    }
    printf("The Total mark of 5 subjects is %.2lf",b);
    b=b/5;
    printf(" & the avarage mark is %.2lf",b);
    return 0;
}
```

Test Result:

```
Please enter the Marks of 5 subject: 52
65
84
36
45
The Total mark of 5 subjects is 282.00 & the avarage mark is 56.40
Process returned 0 (0x0)   execution time : 25.885 s
```

```
10        printf("The Total mark of 5 subjects is %.2lf",b);
```

Discussion: This programme will show the average number of subject. I don't face any problem solving this question.