CENG103 – Computer Programming 1 FALL 2017 - 2018

Lab Guide #3 - Week 3

OBJECTIVE: To get acquainted with Microsoft Visual Studio 2017

You will learn how to:

 Data Types, arithmetic expressions, Built-in functions, Relational and logical operators, if statement, compound statement

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Q1. Calculate the sum, difference, and product of two given numbers. (Use integer numbers)

Example Run:

```
Enter first number: 9
Enter second number: 5
The sum of the numbers: 14
The difference of the numbers: 4
The product of the numbers: 45
```

Project_name: LabGuide3_1 File_name: Q1.cpp

Q2. Correct the errors of the C program given below, and then execute it to see the result.

```
include (stdio.h)
  main(void)
       /variable declaration
       double num1, 2ndnum;
       character ch1,ch2
       printf("Enter two double numbers:");
       scanf("%c %c", num1, 2ndnum);
       printf(Enter two characters);
       printf("%d\t%d",&ch1,&ch2);
       avg = num1 - 2ndnum \setminus 2;
       /* displaying the result /
       printf("Average is:", &avg);
       printf("Two characters are %d %d",&ch1,&ch2);
Example Run:
Enter two double numbers: 12.1 17.3
Enter two characters: a \boldsymbol{x}
Average is 14.70
Two characters are a x
```

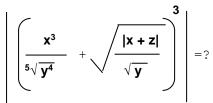
Project_name: LabGuide3_2 File_name: Q2.cpp

Q3. Write a C program that gets a **decimal number** (**2 digits** for **integral** part and **5 digits** for **fractional** part, for example: **45.94239**) from the user and displays the value in the formats given below.

Example Run:

```
Enter a number (2 digits integer and 5 digits fractional):58.49632
58.49632
58.50
58
58.4963200
58.496
58.49632000
58.50
58
58.5
58.5
```

Project_name: LabGuide3_3 File_name: Q3.cpp **Q4.** Write a C program that gets three integer numbers (x, y, z) from the user as input data, and calculates the result of the formula below, and displays the result on the screen.



Example Run:

Enter a value for x: -5Enter a value for y: 1Enter a value for z: 3The result is 1887580.9

> Project_name: LabGuide3_4 File_name: Q4.cpp

Q5. Write a C program to calculate profit or loss on a transaction. See below example run:

Example Run#1:

Enter the value (amount) of the cost price: 500
Enter the value (amount) of the selling price: 700
The status is: Profit
Output amount: 200
Example Run#2:
Enter the value (amount) of the cost price: 1200
Enter the value (amount) of the selling price: 900

Enter the value (amount) of the selling price: 900 The status is: Loss
Output amount: 300

Project_name: LabGuide3_5 File_name: Q5.cpp

Q6. Write a C program that gets a character from the user. If character is an uppercase letter program displays the message "IT IS AN UPPERCASE LETTER",

if character is a lowercase letter displays the message "IT IS A LOWERCASE LETTER", otherwise displays "IT IS NOT A LETTER" message.

Example Run1:

Enter a character : s
IT IS A LOWERCASE LETTER

Example Run2:

Enter a character : W
IT IS AN UPPERCASE LETTER

Example Run3:

Enter a character : ;
IT IS NOT A LETTER

Project_name: LabGuide3_6 File_name: Q6.cpp