

# GEDIZUNIVERSITY

izmir

Faculty of Engineering and Architecture  
Computer Engineering Department

COM 101 – INTRODUCTION TO PROGRAMMING

## LAB Assignment #2

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### A- Example

Celsius, or centigrade, is a temperature scale that describes temperatures in Celsius degrees (°C) and it is used in nearly everywhere else outside the US. That's why, write a C program that converts a temperature value from °F to °C. Note that temperature value in °F is specified by the user. **Hint\*:** You can use the formula below.

$$[^{\circ}\text{C}] = ([^{\circ}\text{F}] - 32) \times 5 / 9$$

**Example:** 212 °F = 100 °C

```
***This program converts a temperature value from °F to °C.***
Please enter the temperature as °F:
212
212.00 fahrenheit is 100.00 celcius.
```

### B- Exercises

**Note that when you doing exercise questions, you are expected to use good programming practices you learn up to that time.**

1- Write C program that displays ASCII values of an integer between 0 and 255. The integer is specified by the user.

```

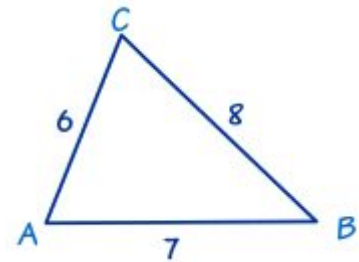
*****This program displays ASCII values of an integer between 0-255*****
Please enter an integer between 0-255:
62
ASCII value of 62 is >.
Process returned 0 (0x0)   execution time : 19.573 s
Press any key to continue.

```

2- Write a C program that finds an angle of a triangle by using The Law of Cosines. Let's assume that all side lengths of the triangle are given by the user and all of them obey the triangle inequality rule.

**Hint:** You can use **double acos(double x)** function by including **math.h**

You can find an illustration in the figure on the right. Let's assume that user enters 6,7,and 8 as side lengths, then he asks for the angle C. Your program should be able to calculate it as **57,9°** according to the given side values by using the following formula.



$$\cos C = \frac{a^2 + b^2 - c^2}{2ab}$$

```

*****This program finds an angle of a triangle by using The Law of Cosines*****
Please enter the first length a:
8
Please enter the second length b:
6
Please enter the third length c:
7
The angle for 8.00, 6.00 and 7.00 is 57.91.
Process returned 44 (0x2C)   execution time : 15.949 s
Press any key to continue.
=

```

3- Write a C program to convert given number of days to a measure of time given in years, weeks and days. For example 380 days is equal to 1 year 0 months 2 week and 1 day. Let's assume that you do not have to consider leap year issue and one month contains 30 days, one year contains 365 days just for the sake of simplicity.

```

***This program converts given number of days to a measure of time given in year
s, weeks and days.***
Please enter the number of day:
380
380 days are 1 year 0 month 2 week 1 days
Process returned 42 (0x2A)   execution time : 4.894 s
Press any key to continue.

```