

Programming Fundamentals Lab

Lab 06**Marks 00****Instructions**

Work on this lab individually. You can use your books, notes, handouts etc. but you are not allowed to borrow anything from your peer student.

Submission

No submission is required.

What you have to do

Program the following tasks in your Microsoft C++ compiler and then compile and execute them. The name of your files will be according to the task given in this lab.

Task 1

Write a program that asks the user to **enter two numbers**. The program should use the **conditional operator** to determine which number is the **smaller** and which is the **larger** and display them in their **ascending order**.

Task 2

Write a program that asks the user to **enter a number** within the range of **1 through 10**. Use a **switch statement** to display the **Roman numerical** version of that number. Do not accept a number **less than 1 or greater than 10**.

Task 3

The **area of a rectangle** is the **rectangle's length times its width**. Write a program that asks for the **length and width of two rectangles**. The program should tell the user which rectangle has the **greater area**, or if the **areas are the same**.

Task 4

Write a program that asks the user to **enter a number of seconds**.

- There are **60 seconds** in a **minute**. If the **number of seconds** entered by the user is **greater than or equal to 60**, the program should display the **number of minutes** in that **many seconds**.
- There are **3,600 seconds** in an **hour**. If the **number of seconds** entered by the user is **greater than or equal to 3,600**, the program should display the **number of hours** in that **many seconds**.
- There are **86,400 seconds** in a **day**. If the **number of seconds** entered by the user is **greater than or equal to 86,400**, the program should display the **number of days** in that **many seconds**.

Task 5

A software company sells a package that retails for **99**. Quantity discounts are given according to the following table.

Quantity	Discount
10 – 19	20%
20 – 49	30%
50 – 99	40%
100 or more	50%

Write a program that asks for the **number of units sold** (must be greater than zero) and computes the **total cost of the purchase**.

Task 6

The following table shows the approximate **speed** of **sound in air, water, and steel**.

Medium	Speed
Air	1,100 feet per second
Water	4,900 feet per second
Steel	16,400 feet per second

Write a program that displays a **menu** allowing the user to select **1 for air, 2 for water**, or **3 for steel** and display a message “**Wrong choice**” otherwise. After the user has made a selection, he or she should be asked to **enter the distance** a sound wave will travel in the selected medium. The program will then display the **amount of time** it will take by rounding the answer to **four decimal** places.

😊😊😊 **BEST OF LUCK** 😊😊😊
