National University of Computer and Emerging Sciences

Lab Manual

for

Programming Fundamentals

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Lab Manual 07

Exercise 1: (5 Marks)

Write a function which takes 5 integers as parameters and returns the maximum from these integers. Also write main to test it.

Sample Input: **60 41 82 93 51**
Sample Output: **93**

Exercise 2: (7 Marks)

Write a program that asks the user to enter an item's wholesale cost and its markup percentage. It should then display the item's retail price.

For example:

If an item's wholesale cost is 5.00 and its markup percentage is 100%, then the item's retail price is 10.00.

If an item's wholesale cost is 5.00 and its markup percentage is 50%, then the item's retail price is 7.50.

The program should have a function named calculateRetail that receives the wholesale cost and the markup percentage as parameters and returns the retail price of the item. Input Validation: Do not accept negative values for either the wholesale cost of the item or the markup percentage.

Exercise 3: (5 Marks)

Write a function which takes a character as input and tells whether that character is Capital letter or Small letter or none (1, 2, and 3). Also Write int main to test this function and fulfills the following input and output requirements.

Sample Input: **A**

Output: **Capital letter**

Sample Input: !

Sample Output: **None**

Sample Input: **g**

Output: **Small letter**

Exercise 4: (8 Marks)

Write C++ program that will ask the user to enter the width and length of a rectangle and then display the rectangle's area. The program calls the following functions, which have not been written:

- getLength: This function should ask the user to enter the rectangle's length and then return that value as a double.
- getWidth: This function should ask the user to enter the rectangle's width and then return that value as a double.
- getArea: This function should accept the rectangle's length and width as arguments and return the rectangle's area. The area is calculated by multiplying the length by the width.
- displayData: This function should accept the rectangle's length, width, and area as arguments and display them in an appropriate message on the screen.

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