SLIIT
Discover Your Future

BSc (Hons) in Information Technology
Year 1

Lab Sheet 11 – Additional Exercises

IT1010 – Introduction to Programming Semester 1, 2021

Exercise 1

The factorial of a nonnegative integer n is written n! and is defined as follows:

n! = n * (n - 1) * (n - 2) * ……1

and

n! = 1 (for n = 0)

For example, 5! = 5 * 4 * 3 * 2 * 1, which is 120

Write a C program that reads a nonnegative integer and computes and print its factorial using a **while** loop.

Exercise 2

A company pays its employees a salary between $200 to $1500. Write a C program (using arrays of counters) that determine how many of the employees earned salaries in each of the following ranges (assume that each employee's salary is truncated to an integer amount). The program should stop entering the salaries, when the user input -1 a salary.

a) $200 - $299
b) $300 - $399
c) $400 - $499
d) $500 - $599
e) $600 - $699
f) $700 - $799
g) $800 - $899
h) $900 - $999
i) 1000 and above

Exercise 3

Write a C program to multiply the content of array A and B and store it in a new array called C.

```
int A[5] = { 10, 20, 30, 40, 50};
int B[5] = { 34, 67, 12, 89, 12};
```

Exercise 4

Write a C program that will enter a name, store it in an array and then display it backwards. Allow the length of the line to be unspecified (terminated by pressing the Enter key). , but assume that it will not exceed 20 characters.

Exercise 5

Implement a function called convertToUpperCase ( ) which take a string (a mix of uppercase and lower case letters) as an argument and display the string in only upper case letters.

```
void  convertToUpperCase (char a[ ], int size );
```

In your main function declare a character array called **address** and copy the address "SLIIT, New Kandy Road, Malabe" using string copy function. Pass the address to the convertToUpperCase ( ) function and display the address in capital letters.

Hint : 'a' – 97, 'z' - 122, 'A' – 65, 'Z' - 90