Department of Statistics & Computer Science, University of Kelaniya

ACADEMIC YEAR – 2022/2023

BECS 11223 – Fundamentals of Programming

Lab Session 9

Throughout this lab session, you will learn about file output and functions in C.

1. Develop a C program that save your student number, name, age and address in to an external text file called *output.txt*.

Upload your completed C program into the Lab 9 – Program 01 submission folder.

2. Complete the following program using the C library functions.

```
/**************************************
Author:
Date Created:
Date Modified:
Purpose:
**************************************/

#include <stdio.h>
//include the math library here

int main (){
          float value;

          printf("Please enter your number\n");

          //scan the user entered

          //find the cosine value of the user input

          //find the sin value of the user input

          //raise the user value to the third power

          //find the nearest integer value which is less than
          //or equal to the user input

          //find the smallest integer that is greater than
          //or equal to user input

          //find the natural log(e) of the user input

          //find the log base 10 value of the user input

          return 0;
}
```

Upload your completed C program into the Lab 9 – Program 02 submission folder.

3. Complete the following program to print out your name, student id and your address.

```
/**************************************
Author:
Date Created:
Date Modified:
Purpose:
**************************************/
#include <stdio.h>

//function prototype

int main () {
          //function call

}

/*******************
Input: No input Return: None
Purpose: To print out the personal information
*******************/
void personal_info()
{
          //print your name here

          //print your student id

          //print your address here

}
```

Upload your completed C program into the Lab 9 – Program 03 submission folder.

4. Write a C function to find the largest number of three user input numbers and display the largest number.

Upload your completed C program into the Lab 9 – Program 04 submission folder.

5. Develop a calculator using functions in C. Addition, Subtraction, Multiplication and Division of two numbers need to call the relevant function in your implementation.

Upload your completed C program into the Lab 9 – Program 05 submission folder.

6. Write a C value returning function to calculate the factorial value of a given number. Then, call this function in your main function and test it.

Upload your completed C program into the Lab 9 – Program 06 submission folder.

7. Write a function that takes a positive integer as input and returns the leading digit in its decimal representation using a value returning function. For example, the leading digit of 234567 is 2.

Upload your completed C program into the Lab 9 – Program 07 submission folder.