Department of Statistics & Computer Science, University of Kelaniya

ACADEMIC YEAR – 2022/2023

BECS 11223 – Fundamentals of Programming

Lab Session 07

Throughout this lab session, you will learn about more about loops and arrays in C.

1. Write a do–while loop to compute the sum of the first 30 positive odd integers.

Upload your completed C program into the Lab 07 – Program 01 submission folder.

2. Rewrite the following loops as do-while loops.

   a.
```
int count = 0, sum = 0;while (
count < 10 ) { sum += count;
count++;
}
```

   b.
```
int count = 1, sum = 0;
while ( count <= 30 ) {sum +=
count;
count += 3;
}
```

Upload your completed C program into the Lab 07 – Program 02 submission folder.

3. Write a for loop to computer the product of 5, 10, ….. 50.

Upload your completed C program into the Lab 07 – Program 03 submission folder.

4. Write a C program to declare the following integer array:

```
int number[5] = {1,2,3,4,5};
```

   print out the all the elements in the number array.

Upload your completed C program into the Lab 07 – Program 04 submission folder.

5. Write a program in C create the following float array.

```
float zscore[10] = {1.2, 0.9, 0.8, 1.3, 1.4, 1.2, 1.8, 2.2, 2.7, 2.1};
```

   Then, find the sum of all elements of the array. (Summation should be 15.6)

Upload your completed C program into the Lab 07 – Program 05 submission folder.

6. Declare one array for storing the square roots of the integers from 0 through 10 and a second array for storing the cubes of the same integers. Extend the program and store the square roots and cubes for the integers from 0 through 10 and print out content of the two arrays.

Upload your completed C program into the Lab 07 – Program 06 submission folder.

7. Write a program to store an input list of ten integers in an array; then display a table similar to the following, showing each data value and what percentage each value is of the total of all ten values.

n	% of total
8	4.00
12	6.00
18	9.00
25	12.50
24	12.00
30	15.00
28	14.00
22	11.00
23	11.50
10	5.00

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