Department of Statistics & Computer Science, University of Kelaniya
ACADEMIC YEAR – 2020/2021
COSC / COST 11023 – Fundamentals of Programming
Lab Session – 07

Throughout this lab session, you will learn 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 program to the Lab 07 – Program 01 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 program to the Lab 07 – Program 02 folder.

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

Upload your completed program to the Lab 07 – Program 03 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 program to the Lab 07 – Program 04 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 program to the Lab 07 – Program 05 folder.

6. Describe the difference between the following two code fragments.

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

//code fragment 1
for (int i = 0; i < 5; i++)
{
  if ( i % 2 == 0 )
  {
       printf("%d\n", number[i] );
  }
}

//code fragment 2
for (int i = 0; i < 5; i++)
{
  if ( number[i] % 2 == 0 )
  {
       printf("%d\n", number[i] );
  }
}
```

Write the above two code fragments in C program and check the expected output.

Upload your completed program to the Lab 07 – Program 06 folder.