Uva Wellassa University of Sri Lanka
Faculty of Applied Sciences
Department of Computer Science and Informatics
CST 124-2 Object Oriented Programming

Lab Sheet 05

Instructions

- Create a folder in the desktop (i.e. UWU_CST_21XXX) to save your source code files.
- Zip the main folder and upload it to the given link in the VLE course page each week.

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1. Using while loop statements try to get the following outputs.
    a. Display the numbers from 1 to 10 line by line
    b. Display the numbers from 10 to 1 line by line
    c. Display the sequence 1,3,5,7,9 line by line
    d. Display the sequence 1,4,7,10,13,16,… up to 52 line by line
    e. Display the sequence 2,3,5,9,17,… up to 33 line by line
    f. Display all the odd numbers between 1 to 50
    g. Display all the even numbers between 1 to 50
    h. Display all the numbers that are multiple of 3 between 1 to 50
    i. Summation of all the numbers from 1 to 10
    j. Multiplication of all the numbers from 1 to 10
    k. Number of even numbers from 1 to 50
    l. Number of odd numbers from 1 to 50
    m. Sum of the even integers from 2 to 30
    n. Product of the odd integers from 1 to 15

2. Rewrite the above programs using do while loop statements.

3. Write a program to find the sum of the following series using a loop.
   Input the value for variable n through the keyboard.

   $1/1^2+1/2^2+1/3^2+.....+1/n^2$

4. Write a C program to print first ten triangular numbers line by line using a loop.
   Use the formula as n = i(i+1)/2

5. Write C programs to display the following patterns using for loops.

a.
```
*
* *
* * *
* * * *
* * * * *
* * * * * *
```

b.
```
* * * * * *
* * * * *
* * * *
* * *
* *
*
```

c.
```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

d.
```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

e.
```
1 1 1 1 1
2 2 2 2
3 3 3
4 4
5
```

f.
```
1 * * * *
1 2 * * *
1 2 3 * *
1 2 3 4 *
1 2 3 4 5
```

g.
```
    X
   X X X
  X X X X X
X X X X X X X
    X
   X X X
  X X X X X
X X X X X X X
    X
   X X X
  X X X X X
X X X X X X X
```