

UNIVERSITY OF RUHUNA
BACHELOR OF COMPUTER SCIENCE (BCS) (GENERAL) DEGREE
LEVEL II (SEMESTER I)
Laboratory Assignment 03

CSC 2123 – Object Oriented Programming

TIME:3 Hours

1. Set up an array to hold the following values, and in this order: 23, 6, 47, 35, 2, 14. Write a program to get the average of all 6 numbers. (You can use integers for this exercise, which will round down your answer.)
2. Using the above values, write a program to print out the highest number in the array.
3. Using the same array above, write a program to print out only the odd numbers.
4. Write a program to sort the array {23, 45, 12, 56, 22} and to print the result.
5. Write a program to print the result array of sum of the elements given in the two arrays A and B. Elements with the same index should be added together to get the **result** array.
A = {12, 34, 45, 12}
B = {34, 23, 61, 10}

6. Write a program to create a two-dimensional array of the matrix (4 * 3) with values given below and print the matrix.

1	3	4
6	9	2
-6	8	0
5	3	-2

7. Write a program to insert values for an array with the size of 12, and prints **'found'** if the value 6 is in the array and **'not found'** if it is not found.
8. Write a method which determines whether any given integer as parameter is odd or even.
9. Write a method which calculates and returns the area of a circle when the radius is given as a parameter.
10. Write a method which returns the name of the appropriate month when a number from 1-12 given as a parameter.
11. Write a method to print the gap between the largest number and the smallest number of an array, when the array is given as a parameter.

12. Write a method to print the following pattern using nested-loops in a class called **Triangles**. The signatures of the method is:

`void PowerOf2Triangle (int)`

Write the `main()` which prompts the user for the `numRows` and prints the pattern.

```

          1
        1 2 1
      1 2 4 2 1
    1 2 4 8 4 2 1
  1 2 4 8 16 8 4 2 1
1 2 4 8 16 32 64 32 16 8 4 2 1
```
