You may be asked to demonstrate/explain your work to the tutor, if you are absent/unavailable or fail to demonstrate properly, zero marks will be awarded.

Text book: Deitel, H M & Deitel, P J 2013, C: How to program, 7th edn, Pearson Prentice-Hall, Upper Saddle River, New Jersey.

**Marks will be deducted (-0.25) if the submission format is not right**

Submission Format: Copy and paste the question and then write your answer. If it is a programming question copy and paste your code from text editor followed by the screenshots of the output window. Marks will be deducted if this format is not followed. You need to follow the exact sequential number as in the tut sheet. Submit a single file.

# Lab 8

1. Explain Linear search and binary search with examples.
2. Write a complete C program to implement the following searching algorithms:
   Using an array of size 10, populated with random integers, e.g. 0 – 100 to test your program. Don't forget to print initial array, and output (for binary search, print also each sub-array during the searching process).

   a. Linear Search
      a. The function should receive an integer array, a search key and the size of the array as arguments.
      b. If the search key is found, return the location in the array where the search key is found; otherwise, return -1.
   b. Binary Search
      a. The function should receive an integer array, a search key, the starting subscript and ending subscript as arguments.
      b. If the search key is found, return the location in the array where the search key is found; otherwise, return -1.