Data Structure and Algorithms
Fall 2023
BS CS
Assignment # 2

Deadline: **24ᵗʰ December 2023 (Till Midnight)**

Instructions (To be followed very strictly):

- Assignment will not be considered after the mentioned deadline.
- You are required to submit your assignment with code and pdf file of the code.
- In case of cheating, all involved will get a straight "ZERO".
- Comment your code generously.
- If you get the code from somewhere, you will properly site the reference and you should have the complete understanding of the code during Viva.
- Your submission files should be named as:
    - <ID>.pdf

Assignment Statement:

Question # 1: (CLO 3)

Outline the complete step by step procedure using merge sort to sort out the following array.
Array: [21, 20, 12, 23, 45, 2, 17, 6, 15, 14, 9]

Question # 2: (CLO 3)

Outline the complete step by step procedure using Quick sort to sort out the following array.
Array: [12, 15 14, 5, 56 85 10, 57, 36, 21, 45]

Note:
1) Make sure to provide the step-by-step execution of both algorithms.
2) In each step, clearly define the array, and the value of all involved variables.
3) In short, you need to provide the dry run details of both algorithms to sort the given array.
4) Further, the assignment is handwritten.
5) Scan your pages via scanning application (Cam Scanner) and bind them into the single PDF file.
6) Each page in your file should have the name and ID on the top of the page.
7) All the pages without the name and ID will not be considered for marking.
8) Lastly, you must have a complete understanding of your assignment. Any misunderstanding about your written instruction in the assignment during viva will lead to zero marks.