

CSE 4502 – OS Lab

Topic: Shell Script

Marks: 25

- a. Write a shell script that takes in an array of numbers as a parameter to the script and sorts them according to any one of the following sorting algorithms

1. Quick-sort
2. Bubble-sort
3. Selection-sort
4. Insertion-sort
5. Merge-sort

The sorting algorithm you need to apply for your script will depend on the following function

$$\text{Algorithm ID} = (\text{Student}_{ID} \% 5) + 1$$

- **For example-**

$$\text{Algorithm ID} = (134436 \% 5) + 1 = 1 + 1 = \mathbf{2} = \mathbf{Bubble - sort}$$

- **Special Cases:**

- i. If the array passed as a parameter contains anything other than numbers and spaces, your script should raise an error and ask for a new list of numbers during run-time. This error should be handled until an array containing only numbers are passed.
- ii. If no array is passed, your script should raise an error and ask for a new list of numbers during run-time.

- **Submission Guidelines:**

- i. Submit your shell script as “**Sorting_Shell_ID.sh**”.
- ii. Submit the following screenshots-
 - a. Screenshot of the shell script.
 - b. Screenshot of a successful sort operation.
 - c. Screenshot of an execution considering “**Special Case – i**”
 - d. Screenshot of an execution considering “**Special Case – ii**”.
- iii. Submit all the files individually. Do not submit “.zip” files.