

Searching and Sorting Lab

1. Complete the following methods on Searching and Sorting.
2. You may use any language to complete the tasks.
3. You need to submit the one single file containing all the methods/functions. You will get two weeks to complete your lab. **NO LATE SUBMISSIONS WILL BE TAKEN**
4. The submission format **MUST** be maintained. You need to copy paste all your codes in **ONE SINGLE .txt** file and upload that. If format is not maintained, whole lab submission will be cancelled.
5. If you are using **JAVA**, you must include the **Tester class** containing the main method which should test your other methods.
6. If you are using **PYTHON**, make sure your code has the methods invoked through **test statements**.
7. Usage of built in methods/libraries are **NOT ALLOWED**
8. The google form link for this lab is provided in BUX under LAB 6 Searching and Sorting subsection under the **SPRING21 CSE220** lab tab.

Tasks

1. Sort an array **RECURSIVELY** using **selection** sort algorithm.
2. Sort an array **RECURSIVELY** using **insertion** sort algorithm.
3. Sort a **singly linked** sequential list using **bubble** sort algorithm.
4. Sort a **singly linked** sequential list using **selection** sort algorithm.
5. Sort a **DOUBLY linked** sequential list using **insertion** sort algorithm.
6. Implement **binary search** algorithm **RECURSIVELY**.
7. Implement a recursive algorithm to find the n-th Fibonacci number using memoization.