UNIVERSIDAD POLITÉCNICA DE YUCATÁN

Searching and Sorting Algorithms

Project 3

Objective

The student will build sorting and searching algorithms to compare and manipulate data.

Instructions

1. **Searching Algorithms (40%).** For each of the following algorithms reviewed in class: add a brief description of how the work, include its pseudocode, implement it in the programming language you liked the most (Python or C) and include evidence of execution (screenshots):
    a. Sequential Search.
    b. Binary Search.
    c. Interpolation Search.
2. **Sorting Algorithms (40%).** For each of the following algorithms reviewed in class: add a brief description of how the work, include its pseudocode, implement it in the programming language you liked the most (Python or C) and include evidence of execution (screenshots):
    a. Bubble Sort.
    b. Selection Sort.
    c. Insertion Sort.
3. **Final Reflection (20%).** Write a short essay (300-500 words) where you explain the importance of Searching and Sorting algorithms in Data Engineering. Include references to support your ideas. There must be one essay per student.

Submit a zip folder where you include the document report and source code.

Task 1 and 2 can be completed in Teams. Task 3 must be completed individually and include all essays in the document.