Data Structures Assignment

1. Write the C++ implementation of a symbol table using hashing technique. The attributes like scope, type and line-number of occurrence of the identifier's should be stored for each identifier in your created symbol table.

2. Explain any two external sorting algorithms with necessary formulation, numeric example and visual illustration; along with the analysis of their time complexity.

3. Describe a B+ tree and explain how it can be used as a multi-way search tree. Explain the various operations of a B+ tree (Insert, Delete, Search, Print, etc.,), with an example and visual illustration for each case.

Instructions for Submission:

The handwritten physical copy of the assignment, written in A4 sheets with the name of the student and roll number mentioned on the top right corner of the first page, should be submitted to the course faculty though class-representative (CR) before 1ˢᵗ May 2023 10 AM.