GTU Department of Computer Engineering

CSE 222/505 - Spring 2022

Homework #06 Report

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1. System requirements

In this assignment there is 2 parts, first one requires hashmap implementations with multiple hashing techniques, last one asks for three different sorting algorithms last one being recursive.

1. Class diagrams

* Is in the directory

1. Problem solutions approach

Q1:

Not solved

Q2:

All of the sorting algorithms are pretty standard, last one being binary search.

Quick sort:

Theoretical: O(n^2)

Merge sort:

Theoretical: O(nlogn)

New sort:

Theoretical: T(n) = 2T(n/2)

O(nlogn)

1. Test cases

test

1. Running command and results

After a simple “make” command in the terminal these are the result: