CS 6301 – Implementation of Advanced Data Structures and Algorithms
- by Dr. Balaji Raghavachari

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Finding the most frequent element in an array:

The project involves the implementation of finding most frequent element in array using Hashing with O(n) and sorting with O(n logn). Analyzing the performance of both the implementations on varied data set (in size) was the focus.

Problem Statement

Compare the running times of the O(n) and O(n log n) algorithms for computing the most frequent element in an array.

Software Requirements (Used)

Java version: Java v1.8.0_31
JDK: Oracle Java SE Development Kit 8
Editor: Eclipse

Instructions to run the code (for detailed, please check readme.txt)

To compile the file

```
>javac Driver.java
```

To run the program use the following command

```
>java Driver
```

	AVG RT*(in msec)		Memory	
Array Size (n)	Using Hashing	Using Sorting	Using Hashing	Using Sorting
1000	18	8	2MB/128MB	2MB/128MB
10000	45	63.4	5MB/128MB	6MB/128MB
100000	265	493	42MB/128MB	46MB/128MB
1000000	970	1952	42MB/128MB	46MB/128MB
10000000	14956	16275	400MB/635MB	452MB/645MB