

## Hashing

Design a C++ program to store data given in employee.txt file in a hash table. You are **not allowed** to use any of the container classes in C++, you may design your own containers if necessary. You need to use the following two hash functions using employee name as the key. Outputs: Count the number of collisions for each hash function and report the load factor. Explain what your collision resolution strategy is.

### Hash Function 1

```
public int hashCode() {  
    int hash = 0;  
    for (int i = 0; i < length(); i++)  
        hash = (hash * 31) + charAt(i);  
    return hash;  
}
```

### Hash Function 2

```
public int hashCode() {  
    int hash = 0;  
    int skip = Math.max(1, length() / 8);  
    for (int i = 0; i < length(); i += skip)  
        hash = (hash * 37) + charAt(i);  
    return hash;  
}
```

Turn in your explanations, results, and code.