Assignment 6 - Due on Nov 28th 2021

Github link : https://github.com/kpavan95/CS5343/blob/main/src/com/assignments/assignment6/

Requirements

- JDK 8 and above installed

Zip file

As part of the submission, a zip file will be provided which will have 3 items
- Assignment folder: It's a java project which contains the code . Note: you can also go to the above Github link and look at the code.
- assignment5.jar: It's the executable file to run the program. Instructions to run it are provided below in the Execution Instruction section
- This readme file in pdf format

Build Program

Note: the executable jar is already provided as part of the assignment submission so the jar can be downloaded and this part can be skipped.

- Download the source folder submitted or download it from the github link.
- Open terminal and change directory to the root folder
- Create a binary folder to store the .class file

mkdir bin

- Compile the .java files using the following command

javac src/com/assignments/assignment6/.java -d bin/*

- Change directory to bin folder

> cd bin/

- Create a Executable jar file using the .class files

jar cfe assignment6.jar com/assignments/assignment6/Assignment6 com/assignments/assignment6/.class*
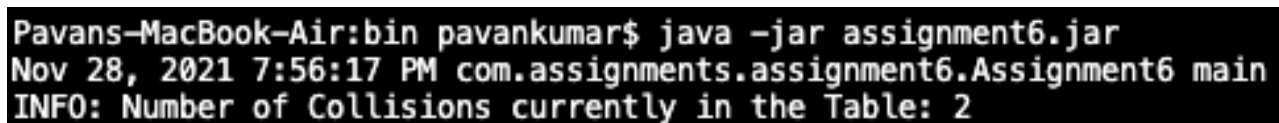
now the executable assignment6.jar is ready to use.

Execution Instruction

To run the program, enter the following command in terminal where the executable jar is located

java -jar assignment6.jar

The program starts and will guide the user through the process. Lets look at it in detail below

The screenshot below shows the program's execution in different stages


```
Pavans-MacBook-Air:bin pavankumar$ java -jar assignment6.jar
Nov 28, 2021 7:56:17 PM com.assignments.assignment6.Assignment6 main
INFO: Number of Collisions currently in the Table: 2
```

Figure 1: Current Collisions

```
Nov 28, 2021 7:56:17 PM com.assignments.assignment6.Assignment6 main
INFO: Number of Collisions Totally occured in the Table: 7
```

Figure 2: Total Collisions

```
Nov 28, 2021 7:56:17 PM com.assignments.assignment6.Assignment6 main
INFO: The Hash Table after populating 20 names: HashTable
Index   =       Key
4       =       mxT
6       =       HjzSI
7       =       QVHLGte
9       =       QdneC
11      =       WfcoFkd
12      =       fHu
13      =       fWOOVe
14      =       wmTuhv
16      =       NdBQ
17      =       CRCimML
20      =       gYfXSUi
24      =       fvHz
26      =       cYQWXWn
31      =       op ZzMR
34      =       onECgRW
35      =       OqDY
38      =       HHEonYj
41      =       tXgU
50      =       xffz
52      =       QbTwsig
```

Figure 3: HashTable