NICE Actimize Home Assignment – Oren Vaknin

The program contains two primary methods:

***initDau***– receives a file name as an input and does not return an output. The method runs over the file and arranges all the data in a Hash Map. The keys of the map are the dates and the values are Hash Sets contain the DAU Ids.

Time Complexity – **O (n)**

Space Complexity – **O (n^2)**

***countDauByDate*** *–* receives a date as an input and returns the number of DAU of this day.

Time Complexity – **O (1)**

Space Complexity – **O (1)**

**Improvements:**

I tried to make it efficiency as much as I can. I used Hash Map and Hash Set because their time complexity is O (1). Maybe there is a better way to store all the data because the space complexity is O (n^2)and this is not perfect.

**More important thing:**

In App.java file I run the program with different cases (in addition to unit tests). Two of them are in comment because they throw exceptions (and they should it is ok) so if you want to run it just remove the comments.