In this Homework, you are required to design a Spotify-like environment and program using **linked lists**. All data should be stored in list lists. Your program will work on the command line where the commands are given in one line as:

C <Name> : Creates a person with the name given in the line

eg: C Ahmet

Attention: Only one person with a given name can exist in storage (only one Ahmet can be added)

S <Name> <Song> : Sets the <Name> likes the <Song>

eg: C Ahmet Show must go on

Attention: Consider the case <Name> has not a created before.

E <Name> <Song> : Erases the assignment (<Name> doesn't like the song anymore).

L <Name> : Lists the songs of the person <Name> likes.

Attention: Consider the case no song has been assigned to the person <Name>.

N : List all name of registered people

M : List all the songs that liked by anyone

R: Recommends the most popular 3 different songs (You have to seek for each individuals list and count encounters for each song)

Also, contemplate other cases that will cause the program to crash

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Sample Data Structure

A linked list that stores name of people:

```
public class Person {
String PersonName;
Person next;
}
```

Presuppositions & Obligations

- All personal names consist of a single word, e.g. Albert, Berfu, or Cafer. Thus you can assume that, for such as S or E, the second word of the command is the first word of a song's name (If any, following words is the continuation of the song name)
- Every data should be stored in linked lists (except for necessary primitive data types such as integer, char, etc.)
- Analyze the time complexity of each data structure and function that you utilize in Big-O notation.
- You have to write a report with the name "Report_HW1.pdf" explaining your HW (purpose, how did you solve it, what complexity you have, etc.) and which environment you used (Eclipse, NetBeans, for example). The person who reads your report can easily use the class you have written.
- Submissions should be in the form of a zip/rar. When extracted, the result should be a single folder with the name "Group_ID" (where ID is the number of your group which assigned for your cluster,
  check https://docs.google.com/spreadsheets/d/173IvOMQZXzuKFR7w5oIu0rTovfEyTRDC_EsVz039Jlk/edit?usp=sharing%20 if you do not know)
- Don't forget to put your project and report into the zip/rar file. Report is the 20% of project grades.
- All assignments will be checked via Moss (for more info https://theory.stanford.edu/~aiken/moss). Therefore be honest and do your assignment with only your group.
- Add a 3x2 table in your report and explain contributions as a percent of each member of a group. Example :

Dilara	Hercan	Halit Kaan
35 %	35 %	30 %

- Feel free to ask further questions to the teaching assistant (ahmetmuratturk@eskisehir.edu.tr)