

The God we trust

One is glad to be of service



Forth Assignment Report

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Introduction:

Well in this assignment we are going to program a sample of Netflix using OOP in java. •

I believe that the most important objective of this assignment is using and understanding what OOP is and how we should use it in our projects and homework. •

Another objective of this project is using UML for designing and programming the classes. •

Well the Majority of approach that I have used in this assignment was OOP principles such as: •

1- Inheritance

2- Encapsulation

3-Making Different Classes(Clean code)

Design and Implementation:

- Well the solution that we are used here is that we have divided the problem into smaller challenges and tried to solved these challenges.

The whole idea was to program a sample of Netflix but what should we do at the first step? It's confusing right? But after thinking about this question and checking the Netflix App we realized that in fact all the things that Netflix is presenting are dividing in two things:

1- TVShows

2- Movies

So now at this point we know that we should have two Java Classes to write down their codes;

But we know that "Movie" has something in common with "TVShow" but it has some other attributes too, as a result we decided that "Movie" Class should inherit from "TVShow" Class.

After all of this we solved the real problem that was what to do, and now just remain some other challenges(like User Class and Menu(?Class)) that we have already solved them before and know what to do.

UML:

User Class

Private String username, password and there getters and setters.

3 Array list of "TV Show" data type for "Favorites TV Show", "Watch History" and "Recommended TV Shows".

Functions for searching by title, searching by genre and searching by release year in "Favorites TV Show" List.

In the end some other functions for adding and getting report of "TV Shows" in the "Recommended TV Show", "Favorites TV Show" and "Watch History" lists.

TV Show Class

private String title, genre;
Private int(or double) release year, duration, rating and their
getters and setters and constructor.

Netflix Services Class

Defining 3 Array list of one for "TV Show" data type calling "tv Shows ", one for "User" data type calling "users" and one for "Movie" data type calling "movies" and a constructor for these.

Functions for "add movie"(Boolean type), "add tv show"(Boolean type), "create account"(Boolean type), "login"(Boolean), "logout"(Boolean type), "search user"(Optional <User>), "search by title"(Array List <TV Show>)", "search by genre"(Array List <TV Show>), "search by release year"(Array List <TV Show>).

Movie Class Extends from TV Show Class

This class only has one attribute more that TV Show class and it's length of the movie. And then it's constructor is the same as the tv show's constructor with length extra.

Because of the length and following the "Encapsulation" principles we need to define it's getter and setter.

Thank for reading!