Netflix

Assignment brief:

Time 2hr 30 min (open book – no external websites).

Create a **project solution** (named **<P2 your name and student id> e.g. P2McGowanAidan6048201).** **Ensure your name and student number are placed in the Javadoc comments of all the classes / Test classes etc you create.**

Part 1 – 40%

You have been tasked to design, implement, and unit test (Part 2) part of a Netflix video content application. The system is expected to support several specific **Content types** such as **Movie**, **Series**, and **Documentary**. You are the first developer of the system and are tasked with designing and implementing the **Movie**, although you are encouraged to design the system to support the future development of other specific Content.

Data required for the system.

	Description	Application	Business rules
title	The title of the Content type	All Content	Text: min length 1 and max 10 (inclusive) E.g. Godfather
description	A keyword description of the content	All Content	Text : min length 0 and max 25 (inclusive). Each word will be separated by a hyphen, eg Mafia-Blood-Revenge (note you do not have to enforce the separator rule business in your code). The max length includes the total characters of all words and hyphens eg : Mafia-Blood-Revenge would be length 19.
Maturity rating	Maturity rating for the content	All Content	Allowable values **U**, **PG**, **TWELVE, FIFTEEN, ADULT.** **Each value also has a text description :** U - Suitable for all ages PG - Parental Guidance TWELVE - Suitable for ages 12 and up FIFTEEN - Suitable for ages 15 and up ADULT - Suitable for adults only
duration	The duration in minutes	Movie (only)	Whole number: range 1 and 600 minutes (inclusive)

Additional method:

displayDetails()

You have been asked to create a **displayDetails** method that will output to screen (console) all data for each Content instance. *Note you <u>do not</u> need to Unit Test this functionality*.

For example, the output for a Movie would be:

```
Title          : Gladiator
Rating         : PG - Parental Guidance
Description    : romans-slaves-blood-gore
Duration       : 154 (mins total)
Duration       : 2 hours, 34 mins.
```

Part 2 – Testing – 20%

1. Unit Test applicable code from **Part 1**.

Part 3 - Netflix Util/Search class - 40%

Create a *Netflix* class to support the system for content display and searches. Each method should be *static* and accept and return an *ArrayList* of the **appropriate type**. You do not need to Junit Test this class – you should create ad-hoc testing based on the test data shown below (the three movies) and exercise each method in turn from a main method in the class. Using your knowledge of OOP you should create the functionality based on the following:

1. Create a **displayContent** method i.e. display all objects in the parameter argument ArrayList.

```
All Movies
Movie details
Title          : Gladiator
Rating         : FIFTEEN - Suitable for ages 15 and up
Description    : Romans-slaves-blood-gore
Duration       : 154 (mins total)
Duration       : 2 hours, 34 mins.
Movie details
Title          : Wall St
Rating         : ADULT - Suitable for adults only
Description    : money-pen
Duration       : 180 (mins total)
Duration       : 3 hours, 0 mins.
Movie details
Title          : Godfather
Rating         : PG - Parental Guidance
Description    : Mafia-blood
Duration       : 126 (mins total)
Duration       : 2 hours, 6 mins.
```

2. Create a **searchByMaturityRating** method i.e. search for all objects in the parameter argument ArrayList that match a specified Maturity rating (eg U, PG etc). You should return and display the contents of the ArrayList containing any that satisfy the search criteria.

```
All PG
Movie details
Title           : Godfather
Rating          : PG - Parental Guidance
Description     : Mafia-blood
Duration        : 126 (mins total)
Duration        : 2 hours, 6 mins.
```

3. Create a **searchByDuration** method i.e. search for all objects in the parameter argument ArrayList that have a duration within the specified min **and** max search duration range (inclusive)

```
Matched on duration >= 160 and <= 200
Movie details
Title           : Wall St
Rating          : ADULT - Suitable for adults only
Description     : money-pen
Duration        : 180 (mins total)
Duration        : 3 hours, 0 mins.
```

4. Create a **searchByKeyword** method i.e. search for all objects in the parameter argument ArrayList that have a description that includes a keyword search. Eg searching for the keyword "Blood".

```
Matched on search word Blood
Movie details
Title           : Gladiator
Rating          : FIFTEEN - Suitable for ages 15 and up
Description     : Romans-slaves-blood-gore
Duration        : 154 (mins total)
Duration        : 2 hours, 34 mins.
Movie details
Title           : Godfather
Rating          : PG - Parental Guidance
Description     : Mafia-blood
Duration        : 126 (mins total)
Duration        : 2 hours, 6 mins.
```

When complete compress (zip) the entire *Eclipse solution* and upload it to **Assignments** (P2 assessment) on CANVAS.

Now : check the uploads to ensure you have submitted the correct files.

[END]