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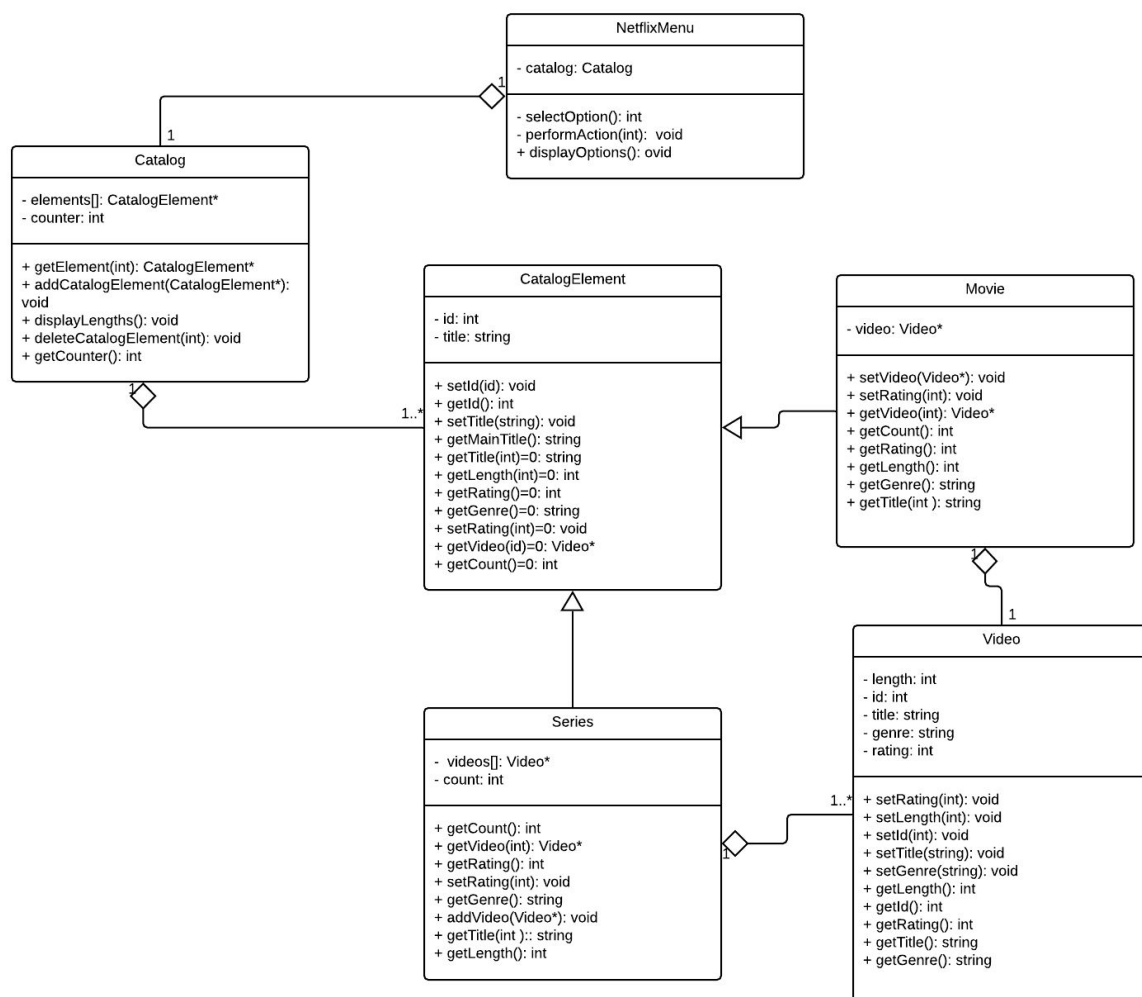
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Final Project

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Object Oriented Programming

Introduction

Currently streaming services such as Disney plus, Netflix, Amazon Prime Video, etc. have been very successful and their demand has been increasing and this is due to several factors such as the image being of high quality and that it has good audio when playing when watching a series or movie. Also, what this type of services provide us is that the user can rate a film and that it can interact with other accounts to see a series at the same time. In addition, when paying, these applications try not to put some commercial to make the consumer experience more satisfying. Therefore, our goal is to create a program that can search for a program or series either through a specific genre with its respective genre or rating and that this gives us the option to be able to change that rating.

UML Diagram

Video
https://youtu.be/28xELWDKbRk

We can clearly identify the different classes throughout the code, also specified in the UML diagram. Inheritance was implemented with the CatalogElement class to Movie and Series,

being the first one an abstract parent class, by having virtual methods. All the variables of the classes are private and can only be accessed by getters and setters. We can see overriding in several methods of the CatalogElement class, that are redefined in their child classes, such as: getGenre, getVideo, getTitle, and more. In order to achieve overriding, we had to use inheritance from one parent class to two childs, which in turn is known as polymorphism, because the same method behaves in different ways depending on the childs class. As mentioned earlier, there is only one abstract class of type CatalogElement. Also, operator overloading was used, in this case only the one corresponding to the cout (<<) was used to print the data of the stored videos, in addition to the series and movies. Finally, inputs validate that the values given by the user are correct or expected for the program to run normally, without generating errors. These represent the best solutions, as all the topics seen throughout the sessions of these five weeks.

Special cases

In some episode that the code may fail is for example, if the .txt file from which the data is read from the movies and series has some error, since the entries are according to this data in that order, another case would be that it had an extra empty line, this would generate an error that does not interrupt the code, by the catch up placed. On the other hand, if the user places a letter or letters instead of some number in some field an integer is expected, this would flag an error. Outside of these scenarios, the code has defined and user-defined exceptions, which make it unceptible to these errors.

Conclusion

For me, this project allowed me to know how a streaming program can be developed and, I also was able to understand how the concepts of pointers, inheritance, polymorphism, etc. can be implemented so that a process can be done for a user to do certain things. I was also able to realize how important a UML diagram can be as this can serve as a sketch to know the classes and methods that these will have.

This project represented the union of all the concepts of object-oriented programming seen in both semesters. Since basic knowledge such as the lifespan of a variable was needed, to understanding the different relationships between classes and data they share. On the other hand, the theme of a streaming service allowed me to see that all this programming is not far from our daily life and it can be applied in almost anything.

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