

CSCE 2004 – Programming Foundations I

Programming Project Report

Name: Cameron Eddy

Date: 4/5/2024

Academic Integrity Statement: I pledge that I have neither given nor received unauthorized help on this programming assignment.

The goal of this programming assignment was to learn more about classes through the implementation of a class about movies. The inputs were the 5 movie details and the year of movies to be searched for. The program outputs the 5 movie details and the movies from the year that was searched. All that was needed for error checking was to make sure the movie was inputted from the year 1920-2024 inclusive as around 1920 is when movies began being made and no movies can be made after 2024.

For design, I set it up as described in the homework outline by following the description of how to implement the classes' public and private variables and methods. Also, I used `getline()` for the input of genre and title. To account for the null variable after inputting the year I used `cin.ignore()` to ignore the null variable and allow me to input the genre. I used three for loops: one for getting the 5 movies as input, the second for displaying movie details, and the third for searching the movies from the year the user inputted. I also had a Boolean to check to make sure a movie was found. If not an if statement would be triggered to let the user know no movies were found from the year they searched for.

For Implementation, I copied a lot of what the hints section on the homework outline told me to do. First I implemented the movie class methods and debugged them with main. Next, I tested my for loop with just one movie for the input to make the debugged process go by faster and I outputted all the movies (only the first one had information the other four had blank inputs in them). Finally, I implemented the search input and a for loop to display movies from the year that was inputted into search. I also added an if statement to the end to see if no movies were found. After completing this I cleaned up my code and changed the input for loop to take in all 5 movies.

Program output one:

```
Details for movie 1:
Title: ABC
Year: 2009
Genre: Thriller

Details for movie 2:
Title: XYZ
Year: 2005
Genre: Horror

Details for movie 3:
Title: DEF
Year: 2023
Genre: Comedy

Details for movie 4:
Title: PQR
Year: 2024
Genre: Drama

Details for movie 5:
Title: ERT
Year: 2022
Genre: Romantic

All movie details:
Title: ABC, Year: 2009, Genre: Thriller
Title: XYZ, Year: 2005, Genre: Horror
Title: DEF, Year: 2023, Genre: Comedy
Title: PQR, Year: 2024, Genre: Drama
Title: ERT, Year: 2022, Genre: Romantic

What year would you like to search movies for: 2003
Searching movies from 2003:
No movies found from 2003.
```

Program output two:

```
Details for movie 1:
Title: TopGun
Year: 1989
Genre: Action

Details for movie 2:
Title: Sully
Year: 2016
Genre: Thriller

Details for movie 3:
Title: Forest Gump
Year: 1994
Genre: Comedy

Details for movie 4:
Title: The Notebook
Year: 2004
Genre: Romance

Details for movie 5:
Title: Barbie
Year: 2023
Genre: Comedy

All movie details:
Title: TopGun, Year: 1989, Genre: Action
Title: Sully, Year: 2016, Genre: Thriller
Title: Forest Gump, Year: 1994, Genre: Comedy
Title: The Notebook, Year: 2004, Genre: Romance
Title: Barbie, Year: 2023, Genre: Comedy

What year would you like to search movies for: 2004
Searching movies from 2004:
Title: The Notebook, Year: 2004, Genre: Romance
```

Program output for multiple years:

```
Details for movie 1:
Title: Star Wars
Year: 1977
Genre: Sci-fi

Details for movie 2:
Title: Borat
Year: 2006
Genre: Comedy

Details for movie 3:
Title: Barbie
Year: 2023
Genre: Comedy

Details for movie 4:
Title: Oppenheimer
Year: 2023
Genre: Docudrama

Details for movie 5:
Title: Moneyball
Year: 2011
Genre: Sports

All movie details:
Title: Star Wars, Year: 1977, Genre: Sci-fi
Title: Borat, Year: 2006, Genre: Comedy
Title: Barbie, Year: 2023, Genre: Comedy
Title: Oppenheimer, Year: 2023, Genre: Docudrama
Title: Moneyball, Year: 2011, Genre: Sports

What year would you like to search movies for: 2023
Searching movies from 2023:
Title: Barbie, Year: 2023, Genre: Comedy
Title: Oppenheimer, Year: 2023, Genre: Docudrama
```

The program worked fine and it was interesting to use `getline()` and `cin.ignore()` in our program. Also, it was nice to implement classes and the homework solely focused on that because it helped me understand classes without having to worry about a lot of extra stuff. It took me around two hours to complete this program.