



HACETTEPE UNIVERSITY

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Problem Definition

In this project, a cinema system that interact with user are asked to implement. While providing this interaction JavaFX has to be used. JavaFX is very useful tool for GUI programs. It has so many features that can be practical when implementing a GUI program. This cinema system has some features such as adding a film, removing a film, adding a user, playing a trailer and so on. In conclusion, a cinema system are required that is dynamic which mens it can change on runtime has to be implemented by using JavaFX.

Solution Approach

Modularism and OOP concepts were used while solving the problem. Because of the cinema system's requirements when user makes some operations the scene of the GUI program has to change. A class was created for each scene. The most powerful and useful feature of Java 8 was lambda expressions for this project. So, almost every action on the GUI was provided by these lambda expressions. For instance, when user clicks on some button the scene changes, making this change was lambda expression. When lambda expression are used, it saves a lot of use of code.

Problems and Their Solutions

One of the biggest problems faced was using of JavaFX, GUI. This GUI was quite different concept compared to previous things. Videos were watched, slides were studied and some Internet sources were used in order to solve this problem and understand the concept. Another faced problem was the design of the GUI. Design of the GUI was challenging but on the other hand it was joyful and innovative. This problem was solved by time.

Benefits of the System

One of the benefits of the system that was designed is that it is dynamic. That means that an user which is admin can add movies, halls and things like that. Also, it keeps the information of the users, films, halls and seats. For instance, if an user signed up, this information keeps in the database. So that means, when the program shut these data does not disappear. When program runs again these data are remembered and ready to use. The system is consistent. So, when user enters a wrong input the system does not crash. It gives an appropriate error message the user. Program leads the user to what to do and what not to do.

Benefits of the GUI

GUI is interactive. So, the program runs until the user exits it. It is quite different than the programs they do not use the GUI. Because, in the other programs, program do some calculations and give you some output. However, in the programs that they use GUI program is changing on runtime. GUI programs have visual advantage. These advantage can explain like that: ther user which is going to be use these kind of programs are familiar with these concepts and also these visuality attract user to use these program.

Resources

- Several Youtube Videos
- [geeksforgeeks.org](https://www.geeksforgeeks.org/)
- stackoverflow.com
- [javatpoint.com](https://www.javatpoint.com/)
- [tutorialspoint.com](https://www.tutorialspoint.com/)

Appendix

Youtube video link:

<https://www.youtube.com/watch?v=3ITJh7Qb5Ao>