CS 319 - Object-Oriented Software Engineering Analysis Report

movAPP

GROUP 6

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1. INTROCUTION

1.1. Purpose of the System

MovApp is an application for passengers, who travel via buses or planes, usage. Main goal of this application is, users view different categories of movies and watch them. The first interface of system is an guest user menu, which have limited action such as watching movie from category part, and login button. Thanks to MovApp users can see popular movies and they can also create a list to watch later, additionally they can rate them according to their personal enjoyment of the film. Therefore, our main aim is to design an application that assist the user to choose, watch and rate any movie.

1.2. Design Goals

1.2.1. Adaptability

Java is one of the programming languages which provide cross-platform portability. Java has easy way to connect with database systems.

1.2.2. Efficiency

The system is going to response the orders with high performance. To provide smoothness while choosing and playing the movies. This is one of the important design goal because users should search and scan the menu and display the films easily and smoothly. Thanks to ProjectActionListener class all object in the program created together and program use same object till the end of execution thus program work efficiently.

1.2.3. Usability

One of the important and main design goal is our program is easy usage of it. Because this app is developed in order to provide tidy and helpful view for movies to users. Therefore, operability of our program is designed attentively. Main menu of system can be interpreted easily by user and also program direct the user to help them.

1.2.4. Reliability

During the project process, after completing every sub-section the program was tested to detect any crash situation or unexpected outputs. Boundary condition inputs were tried to execute and we fix the problems if there are any.

1.2.5. Security

1.2.6. Extensibility

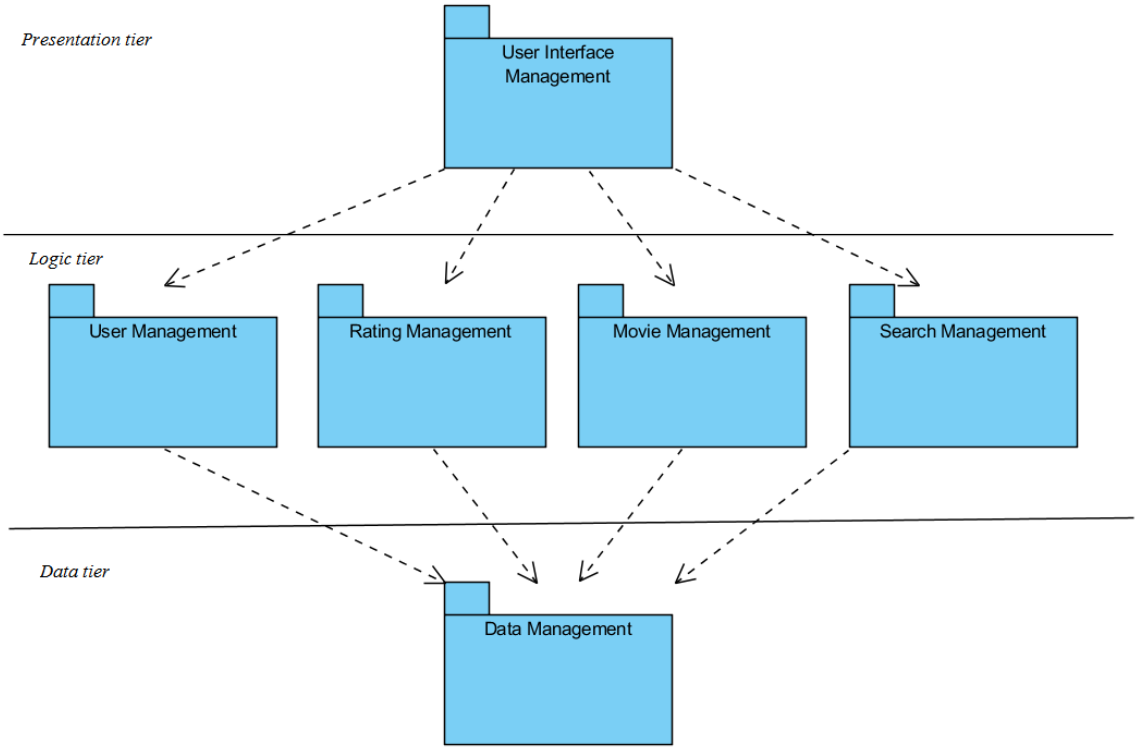
Thanks to Object Oriented Design of the project new parts can easily inserted into the program. To exemplify, in order to create new movie category database of this category needed firstly. Afterwards very few line of code implementation is sufficient.

1.2.7. Portability and Adaptability

1.3. Trade-offs

1.3.1. Efficiency and Reusability

Reusability can be our concern, any datas which have different sun-categories and common features can be viewed and searched via our program. For instance this application can be converted into a program that contains a lot of game or contains a lot of type of musics.



2. Software Architecture

2.1. Subsystem Decomposition

3-tier Architecture is one of the most popular design. Our system also in 3-tier which are data, logic and presentation tiers.

Presentation Tier: The most top level of the program is the user interface. Purpose of the user interface is to translate abstract task and result into visual display. Therefore, user can understand and operate according to his or her needs. User Interface Layer is the only member of this tier. This layer is the monitor where users are able to operate.

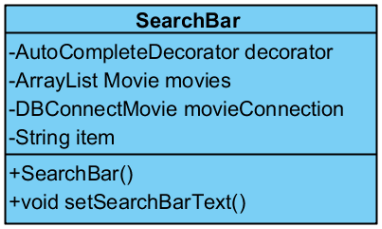
Logic Tier: This layout is the core of our program. It coordinates the application, process commands, makes logical decisions and evaluations. Also, calculations are performed by this layout. Logic Tier is a kind of bridge in between Presentation and Data tier. It moves and processes data between the two surrounding layers. This tier is composed of four layers that are User Management Layer, Rating Management Layer, Movie Management Layer and Search Management Layer.

Data Tier: This layout is the memory of the program. Data tier stores movies, movie descriptions, movie rates, user's lists, movie posters. Also, it retrieves information from database to Logic Tier. Data Tier includes Data Management Layer which has all classes about database.

3.2.2. Search Results

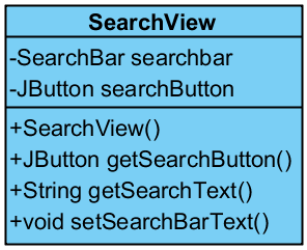
SearchBar:

Search Results is initiated when the results should be displayed. With the help of AutoCompleteDecorator class, this application auto completes according to desired text entry.



SearchView:

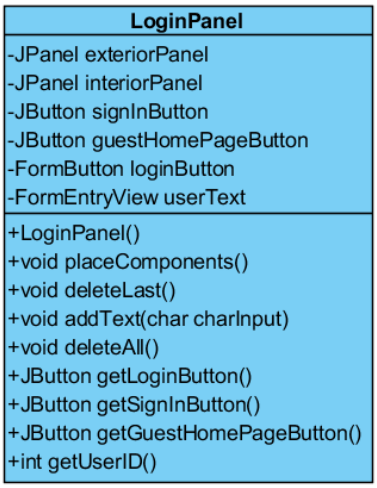
SearchView includes the SearchBar class and also some user-friendly images.



3.2.3. Login Screen

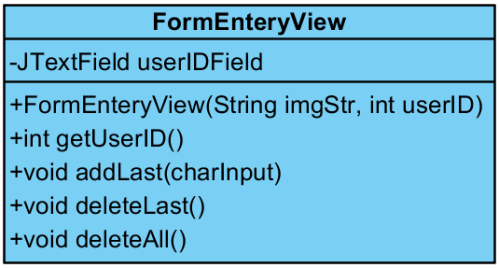
LoginPanel:

"LoginScreen" is initiated when user is directed from "MainMenu" to login or when the user is directed from "SignUpScreen". In order to login or sign up, virtual-touchable keyboard will be accessible in these screens. In this class there are two text-fields for username and password, and there are two buttons: login button and a button that links the user to "SignUpScreen" view.

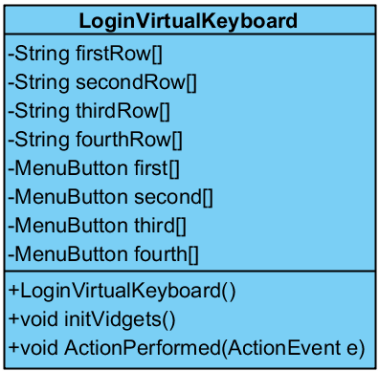


FormEntryView:

When user wants to login, “FormEntryView” will be initiated and program will ask user to give login information which is ID, the must because every transportation in Turkey, when transporters buy ticket, they have



to give their ID information to the sellers. Hence, ID is a core requirement for transportation. As a matter of fact, in the MovApp, the obligation for login is ID.



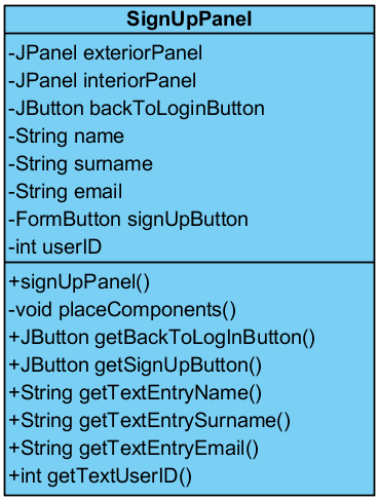
LoginVirtualKeyboard:

LoginVirtualKeyboard is a virtual keyboard that helps the guest user to login the movAPP application. Because of the idea that this application will work on touchable screens, movAPP needs a virtual keyboard for users who want to log in to the program.

3.2.4. Sign Up Screen

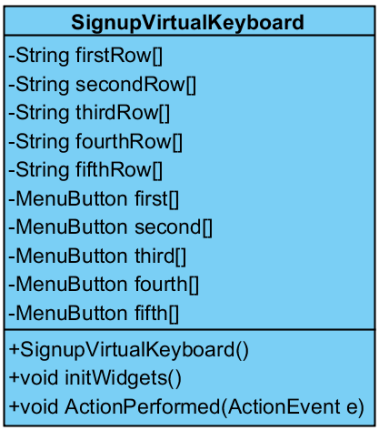
SignupVirtualKeyboard:

SignupVirtualKeyboard is a virtual keyboard. Thanks to this, guest users can sign up to the movAPP application. Because of the idea that this application will work on touchable screens, movAPP needs a virtual keyboard for users who want to sign up to the program.

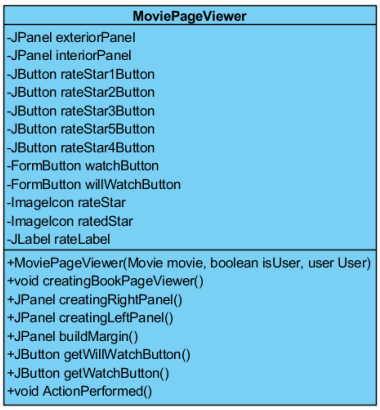


SignUpPanel:

SignUpPanel screen is initiated when user is linked from home page screen.



3.2.5. Movie Screen



3.3. User Management Subsystem

3.3.1. User Class

3.3.2. Movie Class

3.4. Rating Management Subsystem

3.5. Search Management Subsystem

3.6. Data Managements

3.6.1. DBConnectMovie

3.6.2. DBConnectUser

3.6.3. DBConnectRate

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3.7.1. Guest User Login

3.7.2. Search Movie

3.7.3. Rate Movie

3.7.4. Watch Movie

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