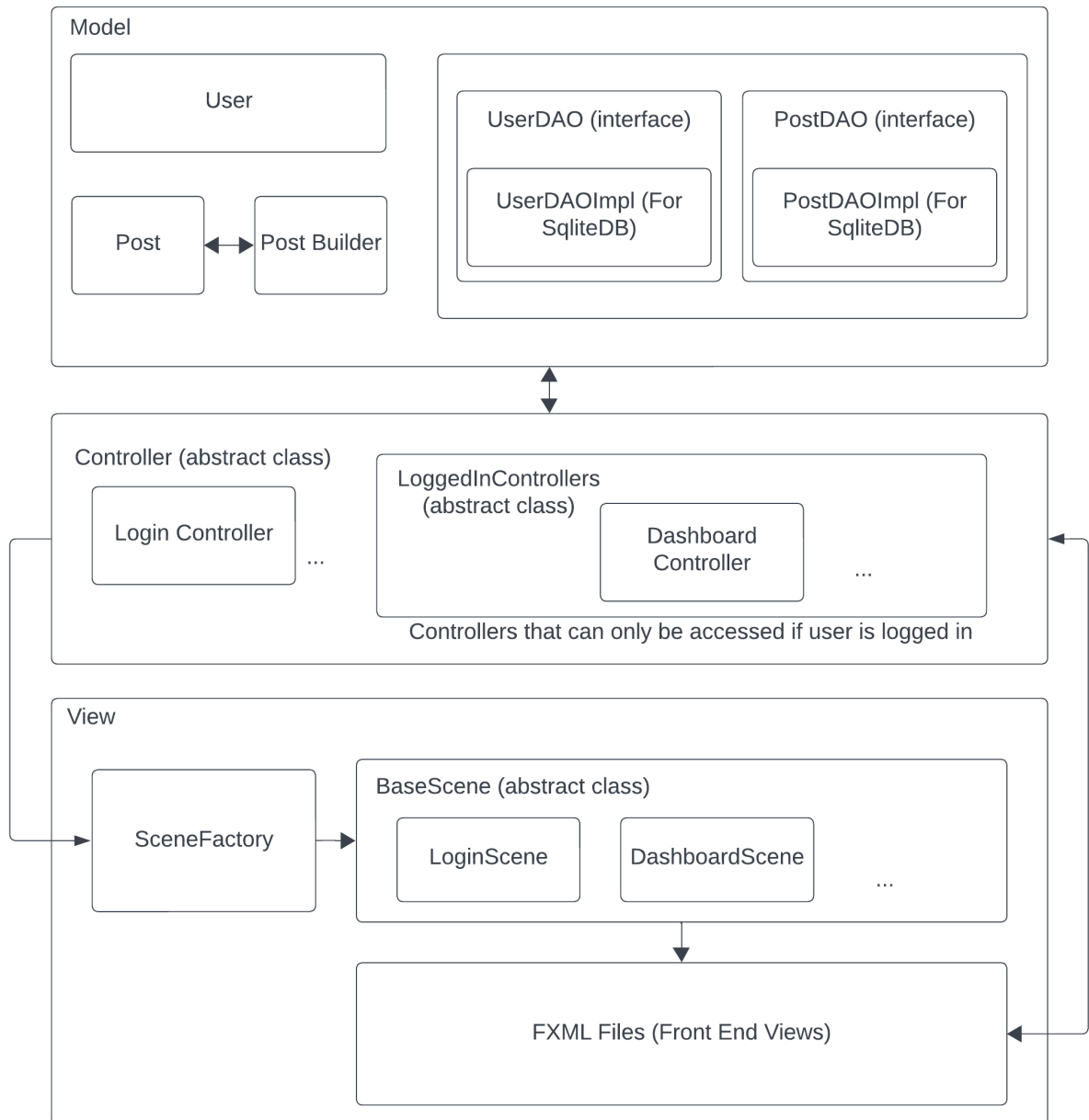**README.md**

Data Analytics Hub

This application provides an intuitive and user-friendly interface for managing user accounts, posts, and more.

Key Features

- User Management: Create, update, and authenticate user accounts.
- Post Creation: Share your thoughts by creating and managing posts.
- Data Analysis: Analyze user data and posts for valuable insights.
- Custom Exceptions: Our application handles errors gracefully with custom exception handling.
- Extensible Design: We've designed the application with modularity in mind, allowing for easy expansion in the future.

Architecture

It uses a MVC pattern to decouple front end views with database models. Data is stored in a sqlite database. Uses Factory design pattern to create views from controller. Uses Builder design patter to create posts.

Compiling and runnning through commandline

To use the Social Media Analyzer project, follow these steps:

Compile: Compile the Java classes using a Java compiler.

Compiling the Main.java file will compile the rest of the files.

NOTE: Make sure you are on the root directory of the project before running the program.

To compile the Main.java file

```
javac src/Main.java
```

To run the compiled file:

```
java src/Main.java
```

Unit Test Cases

The project also contains unit test cases. To run the unit test cases from the command line, compile the test files using the following command:

NOTE: Make sure you are on the root directory of the project before running the program.

```
javac -cp lib/junit-4.13.2.jar:lib/hamcrest-core-1.3.jar:.
src/Tests/TestUtils.java src/Tests/TestPost.java
src/Tests/TestPostCollection.java src/Tests/TestTerminalMenu.java
```

To run the compiled test cases run the following command

```
java -cp lib/junit-4.13.2.jar:lib/hamcrest-core-1.3.jar:.
org.junit.runner.JUnitCore src.Tests.TestUtils src.Tests.TestPost
src.Tests.TestPostCollection src.Tests.TestTerminalMenu
```

Please make sure the whole command is in one line in the terminal before running.

Static CSV Files

The project uses static csv files which are present in the resources folder. The project uses these files to run a few unit test cases.