Architecture

Presentation Layer:

The presentation layer is responsible for providing a user interface to the customer. In a console-based application, the presentation layer will consist of a command-line interface that will display menu options to the user and prompt them to enter inputs.

Application Layer:

The application layer is responsible for handling user inputs and executing business logic. The application layer will consist of several classes, each responsible for a specific function such as authentication, account management, and transaction processing.

Data Access Layer:

The data access layer is responsible for retrieving and storing data from a database. The data access layer will consist of a database connection class that will establish a connection to the database and perform CRUD (Create, Read, Update, Delete) operations on the data.

Business Objects:

Business objects represent the entities in the banking application such as accounts and transactions. Each business object will have a corresponding Java class that will define its attributes and methods.

Security Layer:

The security layer is responsible for ensuring the security of the application. The security layer will include features such as encryption and authentication to protect sensitive data such as account numbers and PINs.

Logging and Monitoring:

The logging and monitoring layer is responsible for logging application events and monitoring the application for errors and performance issues. The logging and monitoring layer will include a logging framework that will log events to a file or a database and a monitoring tool that will alert the system administrator to any errors or performance issues.

Overall, the architecture of the banking application in Java will be designed to ensure the security and performance of the application while providing a user-friendly and efficient interface to the customer. The architecture will be modular and scalable, allowing for easy modification and addition of new features.