Console Based Java Banking Application (Architecture)

By - Saket Verma

Date -9th July 2023

console-based Java banking architecture:

1. User Interface Layer:
   - Console-based interface that interacts with users through text-based menus and prompts.
   - Responsible for receiving user input and displaying output.
2. Business Logic Layer:
   - Contains the core banking functionality and business rules.
   - Handles the processing and validation of user input.
   - Performs operations such as account creation, balance inquiry, deposits, withdrawals, and transfers.
   - Data Access Layer:
   - Manages the persistence of banking data.
   - Interacts with a database or file system to store and retrieve account information.
   - Provides methods for accessing and modifying account data.
   - Domain Objects:
   - Represents the fundamental entities in the banking system, such as accounts and transactions.
   - Includes classes like Account, Transaction, and Customer.
   - Contains properties and methods to manipulate and retrieve data related to these entities.
   - Exception Handling:
   - Includes custom exception classes to handle specific error scenarios, such as insufficient funds or invalid user input.
   - Provides appropriate error messages and handles exceptions gracefully.

1. Security:
    - Implements security measures to protect user information and prevent unauthorized access.
    - Includes features like user authentication and authorization.
2. Logging and Auditing:
    - Logs important events and actions within the banking system for audit purposes.
    - Helps in tracking system activities and troubleshooting issues.
3. Testing:
    - Includes unit tests to ensure the correctness of individual components and functionalities.
    - May use testing frameworks like JUnit or Mockito.
    - Dependency Management:
    - Utilizes a dependency management tool, such as Maven or Gradle, to handle external libraries and dependencies.
    -

4.Documentation:

- Provides clear and comprehensive documentation for the architecture, APIs, and usage instructions.
- May include class diagrams, sequence diagrams, and user guides.

It's important to note that this is just a high-level overview of a console-based Java banking architecture. The actual implementation may vary depending on specific requirements and design choices.