**Requirement Gathering and Analysis Phase**

**Solution Architecture**

|  |  |
| --- | --- |
| Date | 06 Jul 2024 |
| Team ID | SWTID1719978597 |
| Project Name | WalletWatch (Personal Expense Tracker) |
| Maximum Marks |  |

**Solution Architecture:**

1. User Input: The process starts with the user providing some input, which could be in the form of a request, query, or command.

2. Authentication: The input is then sent to the Authentication module, which verifies the user's credentials, such as username and password, to ensure they have the necessary permissions to proceed.

3. Request Handler: Once authenticated, the request is passed to the Request Handler, which analyzes the request and determines the necessary actions to take.

4. Business Logic: The Request Handler then sends the request to the Business Logic module, which applies the necessary rules, calculations, and transformations to process the request.

5. Database Access: The Business Logic module interacts with the Database Access module, which retrieves or updates data in the database as needed.

6. Database Storage: The data is then stored in the Database Storage module, which acts as a repository for the data.

7. Feedback Loop: The Database Storage module sends feedback to the Database Access module, indicating that the data has been stored successfully.

8. Reporting Engine: Meanwhile, the Business Logic module also sends the processed data to the Reporting Engine, which generates reports, analytics, or insights based on the data.

9. Response Handler: The Reporting Engine sends the reports to the Response Handler, which formats the response in a way that's suitable for the client-side application.

10. Client-side App: The Response Handler sends the formatted response to the Client-side App, which displays the results to the user.

11. Loopback: Finally, the Notification Service sends a notification back to the User Input module, potentially triggering another iteration of the process.

**Solution Architecture Diagram:**

