Notes and Password Manager - Java Project Explanation

1. Purpose of the Project

This is a console-based Java application that helps users:

- Store and view personal notes

- Save and retrieve account passwords

- Protect everything using a master password

2. How It's Built (Logical Components)

a) Master Password System:

- The app starts by asking the user to enter a master password.

- If the password is correct, the user can access the rest of the features.

b) Data Structures:

- ArrayList<String> notes → Stores notes

- HashMap<String, String> passwordStore → Stores passwords with account names

c) Menu System:

- A loop displays a menu: Add Note, View Notes, Save Password, Retrieve Password, Exit

- User selects an option using numbers

d) User Input & Interaction:

- Scanner class is used for input

- Each option calls a method (like addNote())

3. Execution Flow

Step-by-step process:

1. User starts the program

2. Program asks for the master password

3. If password is correct, it shows a menu

4. User chooses:

   - Add Note: Stores the note

   - Save Password: Stores account-password pair

   - Retrieve Password: Displays the saved password

5. Loop continues until user selects Exit

4. What Happens When the App Closes
- All notes and passwords are stored in memory only

- When the program ends, all data is lost

- Can be improved with file storage or encryption

Optional Features for Future
- Allow user to change the master password

- Save notes and passwords to a file

- Use AES(Advanced Encryption Standard) encryption

- Build a GUI with Swing or JavaFX