**Description of Modules:**

1. **User Management Module:** Handles user operations such as adding, retrieving, and updating user information.
2. **Product Management Module:** Manages product operations including addition, retrieval, and updating of product details.
3. **History Tracking Module:** Maintains a graph for recording browsing and purchase activities of users.
4. **Recommendation Engine Module:** Generates personalized product recommendations based on user history.
5. **Initialization Module:** Sets up data structures like the adjacency matrix for the history graph.

**Data Structures Used:**

1. **Hash Tables:** Used for managing User and Product data efficiently via hashing for quick access.
2. **Graph (Adjacency Matrix):** Tracks relationships between users and products, such as browsing or purchase activities.

**Justification of Data Structures:**

1. **Hash Tables:** Enable constant time complexity for user and product retrieval based on unique IDs, ensuring scalability.
2. **Graph (Adjacency Matrix):** Provides a clear and compact representation of the relationship between users and products, making it easy to query and update user-product interactions.
3. **Structs for Users and Products:** Organizes related attributes for easier management and modularity.

**Output :-**

