1. Database schema
   1. Users Table

|  |  |  |
| --- | --- | --- |
| Field | datatype | Description |
| User\_id | INT | User Unique number |
| Name | VARCHAR(256) | User name |
| Mail | VARCHAR(256) | User email |
| Mobile | INT | User mobile |
| Nric | VARCHAR(50) | User national IC |

* 1. Accounts Table

|  |  |  |
| --- | --- | --- |
| Field | Datatype | Description |
| User\_id | INT | User Unique number |
| Account\_type | INT | Type of account (saving/credit/etc) |
| Account\_no | INT | Account number |
| Balance | DECIMAL(10,2) | Account balance |
| Date\_created | DATETIME | Date created |
| Max\_limit | DECIMAL(10,2) | Widrawal limit |

* 1. Transactions Table

|  |  |  |
| --- | --- | --- |
| Field | Datatype | Description |
| User\_id | INT | User Unique number |
| date | DATETIME | Transaction date |
| type | INT | Transaction type |
| Account\_no | INT | Account number |
| Amount | DECIMAL(0,2) | Transacted amount |

* 1. Secured\_message Table

|  |  |  |
| --- | --- | --- |
| Field | Type | Description |
| User\_id | INT | User unique id |
| Remark | VARCHAR(256) | Message detail |
| Date | DATETIME | Date message composed |

1. Populate data
2. Query to find
   1. Spending pattern
   2. Monthly average spending for each user
   3. Most frequent transaction type
   4. Customer who have highest and lowest balance
3. Find user who had the most transaction (all transaction type) for each month