Experiment 4:- Designing a Data Flow Diagram (DFD)

Objective:- To create a Data Flow Diagram (DFD) for the Loan Management System

Procedure:- Identify major system processes such as loan application processing, verification, approval, and loan record management.

Expected Outcome:- A set of DFDs that represent the data flow within the software system.

Results:-

Objective

The objective of the Data Flow Diagram (DFD) is to visually represent how data flows between the customer, admin, bank manager, and the Loan Management System. It helps in understanding loan application processing, verification, approval, and loan record management in a banking environment.

Procedure

1. Identify major system processes such as loan application processing, verification, approval, and loan   record management.
2. Identify external entities interacting with the system.
3. Identify data stores used to store loan-related information.
4. Define data flow between entities, processes, and data stores.
5. Construct Context-Level (Level-0) and Level-1 DFDs.

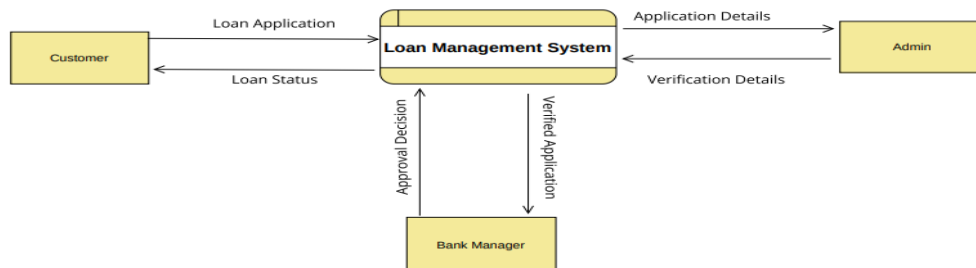**Level-0 DFD – Loan Management System**

External Entities

- Customer

- Bank Manager

- Admin

Process

- Loan Management System (LMS)

Data Flow

- Customer → LMS: Loan Application

- LMS → Customer: Loan Status

- LMS → Admin: Application Details

- Admin → LMS: Verification Result

- LMS → Bank Manager: Verified Application

- Bank Manager → LMS: Approval Decision

Level-1 DFD – Loan Management System

Data Stores

- D1 – Customer Database
- D2 – Loan Database

Processes

1. **Process Loan Application**

   - Receive loan application
   - Store customer data
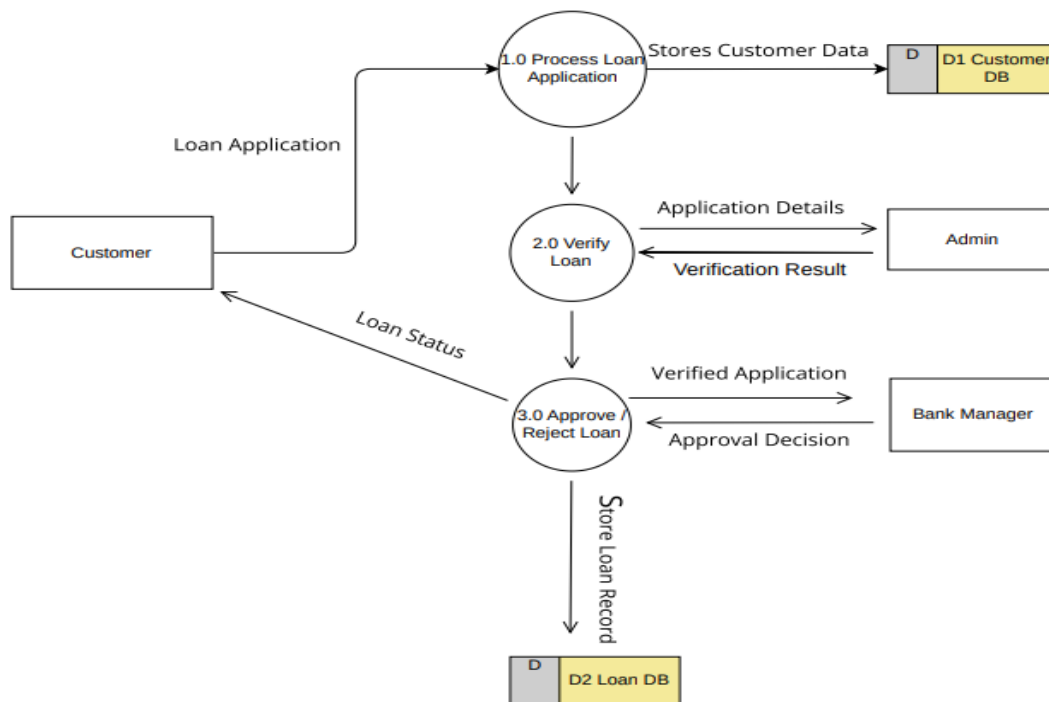
2. **Verify Loan**

   - Send application details to Admin
   - Receive verification result

3. **Approve / Reject Loan**

   - Send verified application to Bank Manager
   - Receive approval decision
   - Store loan record

External Entities

- Customer

- Admin

- Bank Manager

Result

The Loan Management System DFD clearly illustrates the flow of data between the customer, admin, and bank manager. It represents the processes of loan application processing, verification, and approval along with data storage in customer and loan databases.

The DFD provides a clear understanding of how loan-related data moves within the system. It helps in analyzing system functionality, improving transparency, and ensuring proper loan record management.

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