Team Members	Pranati Bharadkar (2020400002) Swamini Dumbre (2020400009)
Class	IT
Batch	A
UID No.	2020400002 2020400009
Experiment No.	5
Subject	SE Lab
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AIM: Data Flow Diagram (Level 0,1 and 2)

Problem Statement:

Modeling consumer data to customize regional services, optimize the supply chain and increase customer satisfaction.

An E-commerce company that requires optimal answers based on customer and vendor data. This data is uploaded in a CSV file. The backend algorithm analyses this data to provide recommendations. The results are maintained and frequently updated on the software by the developers. The clients can add more accounts as their linked clients. These linked clients can access the data of that respective company only. Develop a recommendation model to manage the streamlining of the business processes

Data Flow Diagram

A data flow diagram (DFD) is a visual representation of the information flow through a process or system. DFDs help you better understand process or system operations to discover potential problems, improve efficiency, and develop better processes.

Levels of Data Flow Diagrams

DFDs can range from simple overviews to complex, granular representations of a system or process with multiple levels, starting with level 0. The most common and intuitive DFDs are level 0 DFDs, also called context diagrams.

Level 0: Context Diagram.

This DFD level focuses on high-level system processes or functions and the data sources that flow to or from them. Level 0 diagrams are designed to be simple, straightforward overviews of a process or system.

Level 1: Process Decomposition.

While level 1 DFDs are still broad overviews of a system or process, they're also more detailed - they break down the system's single process node into subprocesses.

Level 2: Deeper Dives.

The next level of DFDs dive even deeper into detail by breaking down each level 1 process into granular subprocesses.

Level 3: Increasing Complexity

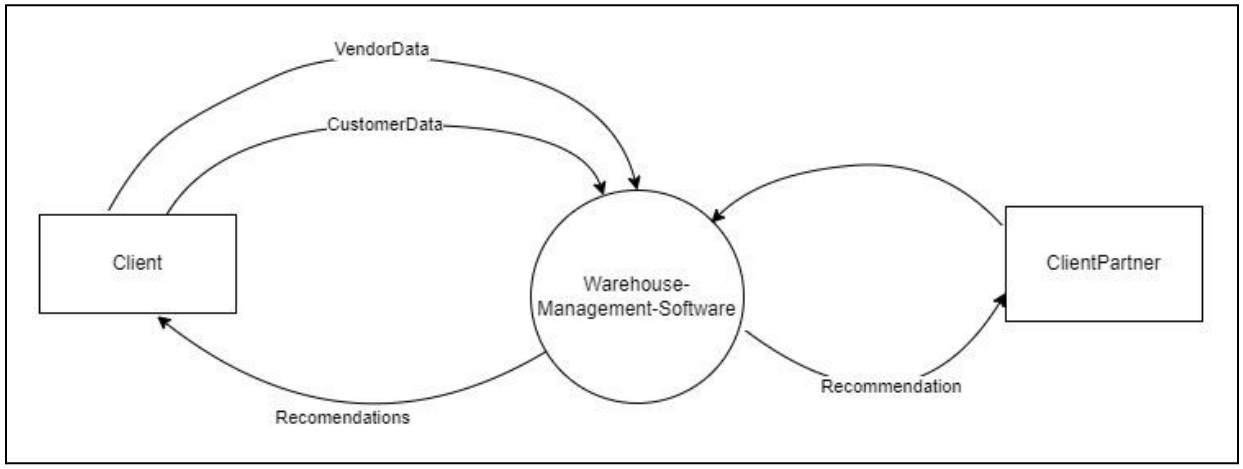
Level 3 and higher-numbered DFDs are uncommon. This is largely due to the amount of detail required, which defeats its original purpose of being easy to understand.

Data Dictionary

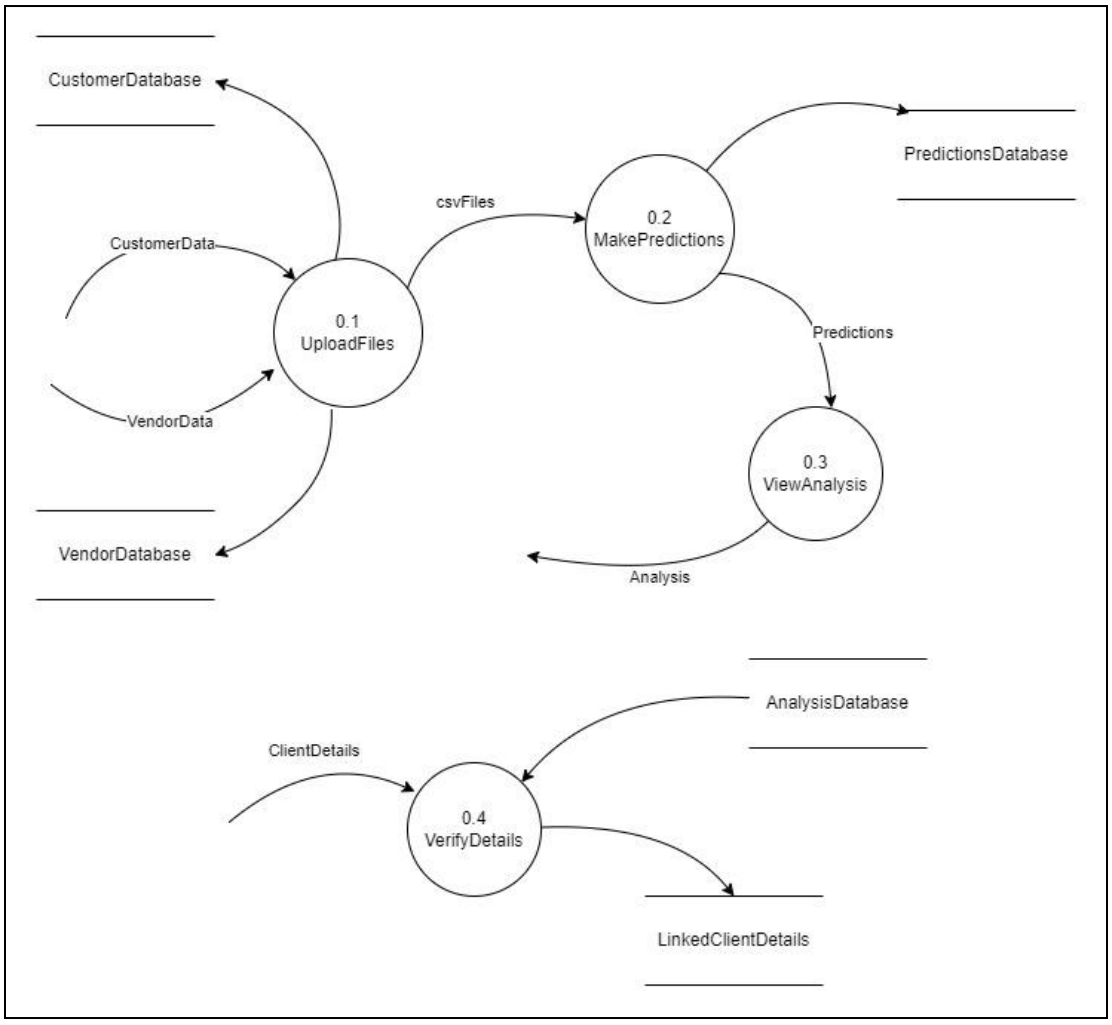
1) CustomerData= Product List+ Product Quantity+ Pincode
    a) Product List: String
    b) Product Quantity: Integer
    c) Pincode: Integer
2) VendorData= Product Sale + ProductID + Collection Center List
    a) Product Sale: String
    b) ProductID: Integer
    c) Collection Center List: Alpha Numeric
3) Prediction= Updated Centers + Restock Products
    a) Updated Centers: String
    a) Restock Products: String
4) ClientDetails= Company Name+ Validate OTP
    a) CompanyName: String
    b) Validate OTP: Integer

Diagrams

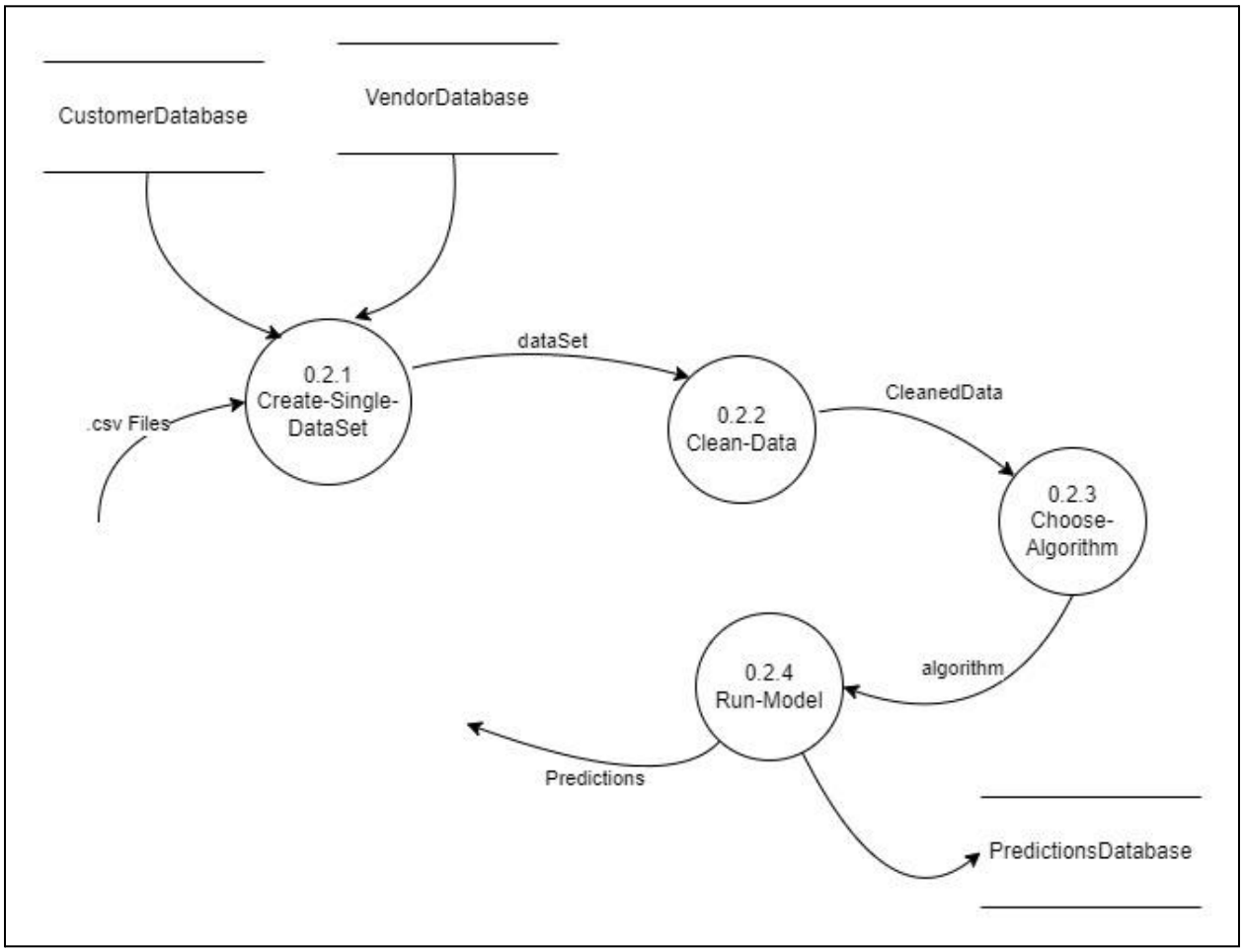
Level 0:



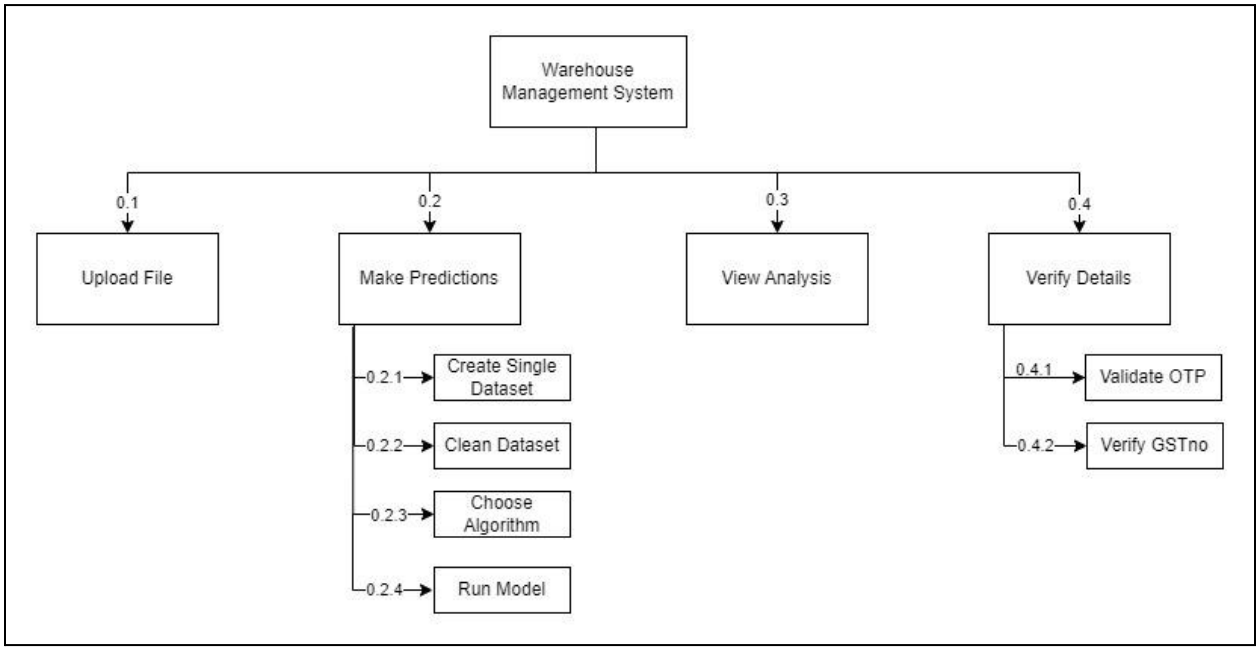
Level 1:



Level 2:


CustomerDatabase
VendorDatabase
0.2.1
Create-Single-
DataSet
.csv Files
dataSet
0.2.2
Clean-Data
CleanedData
0.2.3
Choose-
Algorithm
algorithm
0.2.4
Run-Model
Predictions
PredictionsDatabase

FDD


Warehouse
Management System
0.1
0.2
0.3
0.4
Upload File
Make Predictions
View Analysis
Verify Details
0.2.1
Create Single
Dataset
0.2.2
Clean Dataset
0.2.3
Choose
Algorithm
0.2.4
Run Model
0.4.1
Validate OTP
0.4.2
Verify GSTno

Conclusion

In this experiment,
1. Learned about what is Data flow diagram how it works.
2. Studied in detail about different levels of Data Flow Diagram i.e. Level 0, Level 1, Level2.
3. Designed the Data Flow Diagram for our project and completed the 2 levels.
4. In Level 2, we have expanded the prediction modeling process which is an important feature of our application.