

Project Design Phase-II

Data Flow Diagram & User Stories

Date	31 January 2025
Team ID	LTVIP2026TMIDS79179
Project Name	ShopSmart – A Full-Stack Digital Grocery Store Web Application
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Data Flow Diagrams (DFD)

✓ DFD Level 0 (Context Diagram)

External Entities:

- Customer
- Admin
- Payment System (Mock)
- MongoDB Database

Process:

- ShopSmart Web Application System

Data Flow:

- Customer → Register/Login Details → ShopSmart System
 - ShopSmart → Authentication Response (JWT Token) → Customer
 - Customer → Product Search / Add to Cart / Place Order → ShopSmart
 - ShopSmart → Order Confirmation → Customer
 - ShopSmart ↔ MongoDB → User, Product, Cart, Order Data
 - Admin → Product/Category/Order Updates → ShopSmart
 - ShopSmart → Updated Data → MongoDB
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✓ DFD Level 1 (Detailed Flow)

1 User Authentication Flow

Customer → Enter Email & Password → Authentication Module →
Validate Credentials → Generate JWT → Store User Data in MongoDB →
Return Token to Customer

2 Product Browsing Flow

Customer → Browse/Search Products → Product Service →
Fetch Product Data → MongoDB →
Display Products to Customer

3 Cart Management Flow

Customer → Add/Update/Remove Items → Cart Service →
Update Cart Collection → MongoDB →
Return Updated Cart & Total Amount

4 Order Placement Flow

Customer → Checkout → Order Service →
Validate Stock → Save Order → MongoDB →
Reduce Product Stock → Confirm Order → Customer

5 Admin Management Flow

Admin → Login → Authentication Module
Admin → Add/Edit/Delete Products → Product Service → MongoDB
Admin → Update Order Status → Order Service → MongoDB
Admin → Manage Categories → Category Service → MongoDB

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
Customer	Login	USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
Customer	Product Browsing	USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
Customer	Search	USN-4	As a user, I can register for the application through Gmail	I can register & access the dashboard with Facebook Login	Medium	Sprint-1
Customer	Login	USN-5	As a user, I can log into the application by entering email & password	I can register & access the dashboard with Facebook Login	High	Sprint-1
Customer	Dashboard	USN-6	As a user, I can update or remove items in cart.	I can register & access the dashboard with Facebook Login	High	Sprint-1
Customer (Web user)	cart	USN-7	As a user, I can place an order by entering delivery details.	I can register & access the dashboard with Facebook Login	High	Sprint-2
Customer Care Executive	cart	USN-8	As a user, I can view my past orders. As a user, I can submit ratings and comments.	I can register & access the dashboard with Facebook Login	High	Sprint-2
Administrator	add	USN-9	As a user, I can submit ratings and comments.	I can register & access the dashboard with Facebook Login	High	Sprint-3
Customer	order	USN-10	As a user, I can submit ratings and comments.	I can register & access the dashboard with Facebook Login	High	Sprint-3
Customer	order	USN-11	As a user, I can submit ratings and comments.	I can register & access the dashboard with Facebook Login	High	Sprint-3
Customer	feedback	USN-5	As a user, I can submit ratings and comments.	I can register & access the dashboard with Facebook Login	high	Sprint-3