

Project Design Phase-II
Data Flow Architecture, Requirements (Technical and Functional)

Date	21 April 2025
Team ID	SWTID1743510702
Project Name	ShopEz – Ecommerce website
Maximum Marks	4 Marks

Technical Architecture:

The Personal Finance Tracker employs a standard 3-tier web application architecture:

1. Client-Side (Presentation Tier): A React-based Single Page Application (SPA) running in the user's web browser. It handles user interactions, renders the UI, and communicates with the backend API.
2. Server-Side (Application/Logic Tier): A Node.js application using the Express.js framework. It acts as a RESTful API, handling business logic, processing requests from the frontend, managing user authentication, and interacting with the database.
3. Data Tier: A MongoDB database (likely hosted on MongoDB Atlas for cloud deployment or running locally for development) persists all application data, including user credentials, income/expense transactions, and budget information. Mongoose ODM is used for object data modeling.

Functional Requirements:

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Management	<ul style="list-style-type: none">• User Registration• User Login/Logout• View/Edit Profile
FR-2	Product Management	<ul style="list-style-type: none">• Add New Product (Admin)• Update Product Details (Admin)• Delete Product (Admin)• View Product List• View Single Product Details
FR-3	Cart & Checkout	<ul style="list-style-type: none">• Add Item to Cart• Update/Remove Item from Cart• View Cart

		<ul style="list-style-type: none"> • Proceed to Checkout
FR-4	Order Management	<ul style="list-style-type: none"> • Create Order • View Order History • Cancel Order
FR-5	Admin Dashboard	<ul style="list-style-type: none"> • View Sales Overview • Manage Inventory
FR-6	Search & Filter	<ul style="list-style-type: none"> • Search Products • Filter by Category, Price, etc.

Data Flow Architecture:

