

Project Design Phase

Problem – Solution Fit

Date	23/07/2025
Team ID	PNT2025TMID09656
Project Name	ShopEZ: E-commerce Application
Maximum Marks	2 Marks

1. CUSTOMER SEGMENTS <ul style="list-style-type: none">Active retail tradersTech-savvy investorsFinancial analysts using web platforms	2. PROBLEMS <ul style="list-style-type: none">Need for real-time stock updatesAccess platform on multiple devicesEnsure privacy	3. TRIGGERS <ul style="list-style-type: none">Market volatility increasing real-time demandRising interest in online trading platformsAwareness of data breaches
4. EMOTIONS: BEFORE / AFTER <ul style="list-style-type: none">Before: Anxious, distrustful, limited controlAfter: Confident, secure, empowered in real-time	5. AVAILABLE SOLUTIONS <ul style="list-style-type: none">Traditional stock platformsWebSocket APIs for updatesseamless UI and MERN integration	6. CUSTOMER CONSTRAINTS <ul style="list-style-type: none">Low internet bandwidth during high trading hoursBudget limits for premium trading tools
7. BEHAVIOUR <ul style="list-style-type: none">Customers explore multiple appsCustomers explore multiple apps	9. PROBLEM ROOT CAUSE <ul style="list-style-type: none">Lack of unified architecture for real-time syncInsecure frameworks and poor complianceLegacy Tech not designed for modern users	10. YOUR SOLUTION <ul style="list-style-type: none">Build with MERN stack using Web SocketsEnd-to-end encryption & role-based accessScalable backend with microservices and clean UI/UX
8. CHANNELS OF BEHAVIOUR <ul style="list-style-type: none">Online: Trading blogs, YouTube reviewsOffline: Word-of-mouth, seminars, tech expos		

Problem – Solution Fit Overview:

ShopEZ is designed to bridge the gap between time-constrained consumers and sellers aiming to scale their businesses online. It addresses the increasing demand for a seamless, personalized, and efficient online shopping experience—solving everyday pain points for both buyers and sellers in the digital marketplace.

Purpose:

- Provide a **smooth online shopping experience** with smart product discovery and fast checkout.
- Enable **small to mid-sized sellers** to manage their business using an integrated dashboard.
- Offer **data-driven insights** to improve customer retention and business decisions.
- Create a **trustworthy ecosystem** for product reviews, transparent pricing, and efficient order fulfillment.

Problem Statement:

Modern e-commerce users face the following challenges:

- Time-consuming product searches and unstructured catalogs
- Limited personalization leading to buyer confusion
- Complicated and unsecure checkout processes
- Lack of visibility and business tools for emerging online sellers
- No single platform providing efficient order lifecycle management

Solution:

ShopEZ offers a one-stop e-commerce platform with:

- **Effortless Product Discovery:** Filter-based search, categorized listings, and trend-based suggestions
- **Personalized Shopping Experience:** Smart recommendation engine based on user behavior and preferences
- **Seamless Checkout:** Secure and fast multi-step payment with real-time confirmation
- **Order Management for Sellers:** Centralized dashboard with real-time alerts and shipping integration

- **Analytics Dashboard:** Sales metrics, order frequency, and customer retention data for sellers
- **Admin Panel:** Controls for monitoring users, disputes, and suspicious activity

Scenario: Sarah's Birthday Gift Journey

Sarah, a working professional, needs a last-minute fashion gift for her friend Emily. She uses ShopEZ:

1. **Effortless Discovery:** Navigates to accessories → filters bracelets → selects budget and style
2. **Smart Suggestions:** Finds a gold bangle through "Recommended for You" section
3. **Quick Checkout:** Uses a secure payment gateway and ships directly to Emily
4. **Order Confirmation:** Instantly receives email confirmation
5. **Seller Fulfillment:** Seller processes order through ShopEZ dashboard and ships on time
6. **Happy Ending:** Emily receives the bracelet on her birthday—Sarah celebrates with ease