

Requirement Gathering and Analysis Phase Technology Stack (Architecture & Stack)

Date	6-07-2024
Team ID	SWTID1719933594
Project Name	ShopEZ: E-commerce Application

Technical Architecture:

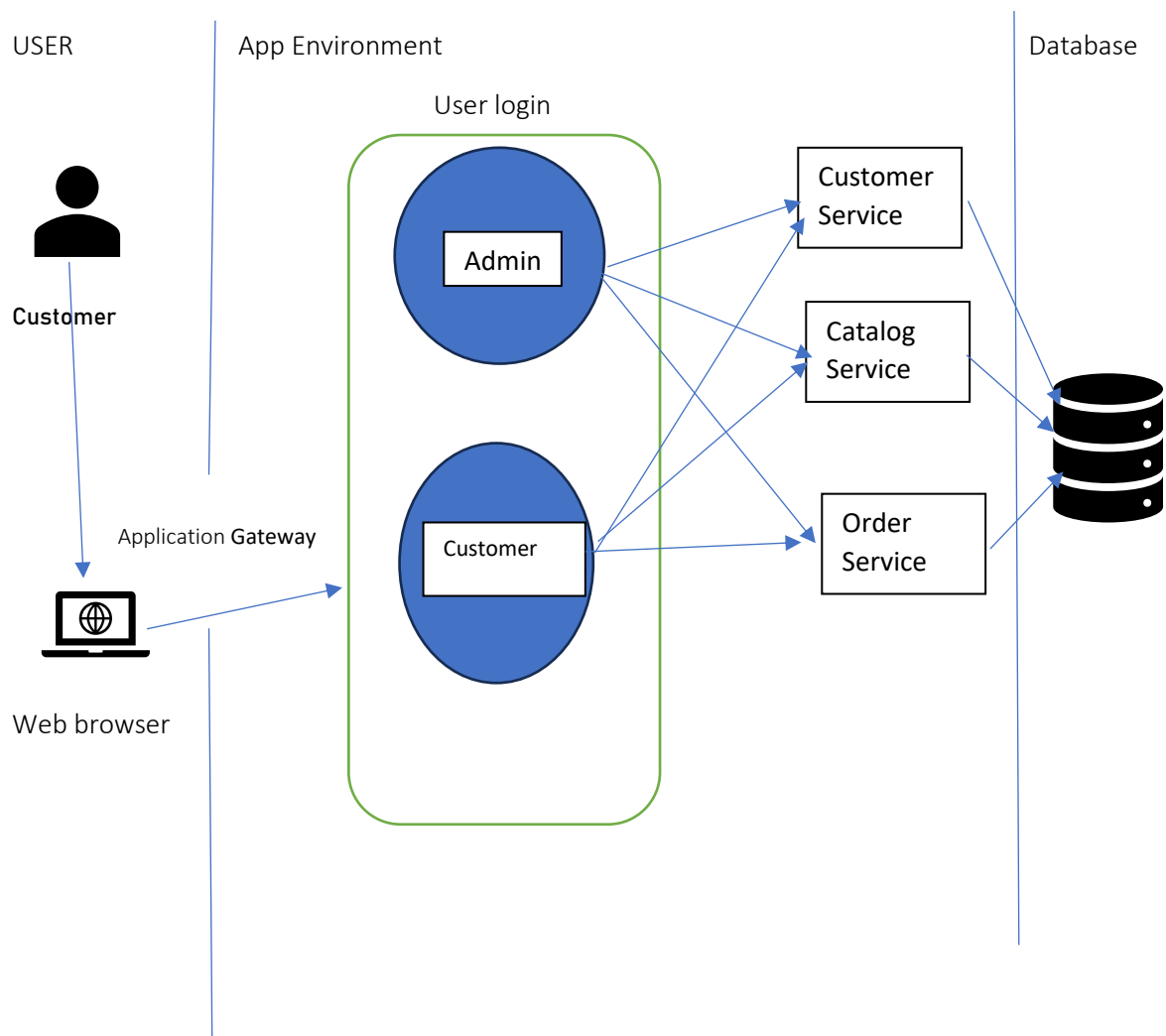


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, JavaScript / React.Js etc.
2.	Frontend Framework	Framework for building interactive UIs	JavaScript
3.	Backend Server	Handles business logic and data integration	Node.js, Express
4.	Database	Data Type, Configurations etc.	MongoDB
5.	File Storage	Storage for user-uploaded files and media	Local Filesystem
6.	Payment Gateway	Integration for handling payments	Braintree
7.	Order Processing	Logic for processing orders	Node.js, Express
8.	Search & Filtering	Enables product search and filtering	Elasticsearch.
9.	Machine Learning Model	Provides personalized product recommendations	Machine Learning Model
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local Server System

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The application leverages several open-source frameworks to ensure flexibility, ease of maintenance, and cost-efficiency.	Bootstrap, npm, reactj.s, MongoDB
2.	Security Implementations	Secure user data and payment transactions	JWT-JSON Web Token

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	Designed for horizontal scaling as traffic grows	Microservices architecture
4.	Availability	Ensures minimal downtime during peak traffic	Load balancers, auto-scaling
5.	Performance	Optimized for fast loading times and responsiveness	Caching strategies, Indexing and query optimization in MongoDB