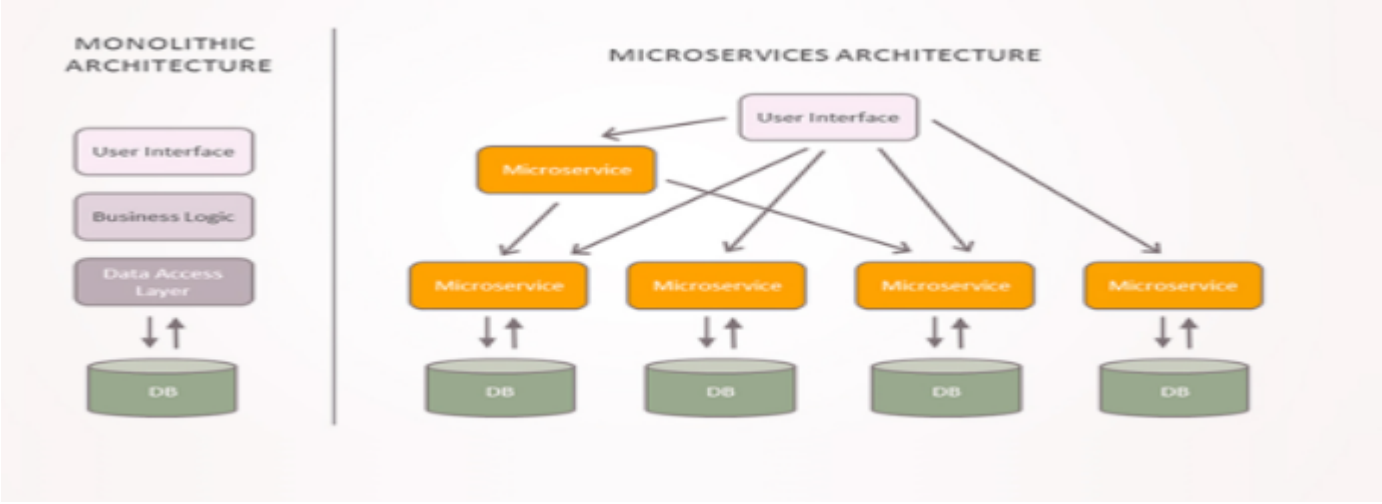
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	17 October 2023
Team ID	NM2023TMID07573
Project Name	Estimation of Business Project
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table



Guidelines:

1. Include all the processes (As an application logic / Technology Block)

2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Frontend	User interface for different user types	Web-based technologies, Frontend Frameworks (e.g., React, Angular, Vue.js)
2.	Backend	Application logic, server, and business processing	Backend Frameworks (e.g., Node.js, Ruby on Rails, Django, Spring Boot)
3.	Database	Data storage and management	Database Management System (e.g., MySQL, PostgreSQL, MongoDB)
4.	Authentication & Authorization	User access control, authentication, and authorization	Authentication Protocols (e.g., OAuth2, JWT)
5.	External Services	Integration with external tools and services	APIs, Services (e.g., Email Service, Facebook API, Shipment Tracking)
6.	Feedback Mechanism	Collection and management of user feedback and inquiries	Custom feedback collection tools
7.	Infrastructure	Hosting, scaling, and security	Web Servers, Cloud Services (e.g., AWS, Azure, GCP), Load Balancers, Security Measures
8.	Frontend Frameworks	Technologies used for building the frontend	Frontend Frameworks (e.g., React, Angular, Vue.js)

9.	Backend Frameworks	Technologies used for building the backend	Backend Frameworks (e.g., Node.js, Ruby on Rails, Django, Spring Boot)
10.	Database Management System	Software used for managing databases	Database Management Systems (e.g., MySQL, PostgreSQL, MongoDB)
11.	Authentication Protocols	Methods used for user authentication and authorization	Authentication Protocols (e.g., OAuth2, JWT)
12	Custom feedback collection tools	Tools for collecting and managing user feedback	Custom-built feedback collection tools

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Utilized for building user-friendly interfaces and application logic	React, Angular, Vue.js, Node.js, Django, Ruby on Rails, Spring Boot, PostgreSQL, MySQL, MongoDB, Docker, Kubernetes
2.	Security Implementations	Ensures data protection, secure user access, and compliance	OAuth2, JWT, Keycloak, SSL/TLS, Web Application Firewalls, Network Firewalls, ModSecurity, NAXSI, AWS WAF, Nginx WAF, Let's Encrypt
3.	Scalable Architecture	Components that enable scalability and performance optimization	Cloud Services , Load Balancers , Serverless Computing, Message Queues

S.No	Characteristics	Description	Technology
4.	Availability	It means that stakeholders, including Customers, Administrators, and Customer Care Executives, can access the system and its features without significant downtime or interruptions. High availability is crucial for ensuring that users can rely on the project's insights and data analysis whenever they need it.	Load balancers,redundancy,cloud services,distributed database
5.	Performance	It involves factors such as the speed of data analysis, the responsiveness of user interfaces, and the ability to handle increasing workloads without slowing down. Optimizing performance is vital to ensure that users can interact with the project smoothly and receive results promptly.	Caching,CDN,database optimization,Scalable Architecture