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

Date	05 July 2024
Team ID	SWTID1720076571
Project Name	SB Foods Food Ordering App
Maximum Marks	

Technical Architecture:

The Deliverable shall include the architectural as below and the information as per the table1 & table 2

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	How user interacts with the food ordering application	HTML, CSS, JavaScript / Angular Js / React Js etc.
2	Application Logic-1	User authentication and user management	Java / Python / Node JS
3	Application Logic-2	Menu management and menu display	Java / Python / Node JS
4	Application Logic-3	Order processing and management	Java / Python / Node JS
5	Application Logic-4	Payment processing	Integration with Stripe / PayPal API
6	Application Logic-5	Delivery Tracking	Integration with third party delivery API
7	Database	User data, menu data, order data	My SQL, NO SQL (MongoDB) etc
8	Cloud Database	Database Service on Cloud	AWS RDS, Google Cloud, etc

9	File Storage	Storage for user profile images, menu image, order receipts	AWS S3, IBM Block Storage, Google cloud storage, etc
10	External API-1	Weather information for delivery time estimation	IBM Weather API, OpenWeatherMap API
11	External API-2	Location and address validation	Google Maps API, Mapbox API
12	External API-3	Restaurant rating and review aggregation	Yelp API, Zomato API
13	Machine Learning Model	Personalized recommendations for users based on order history	Custom Recommendations Model using TensorFlow / PyTorch
14	Infrastructure (Local)	Application deployment on local system	Local Server Configuration
15	Infrastructure (Cloud)	Application deployment on cloud	AWS, Google Cloud, IBM Cloud, etc

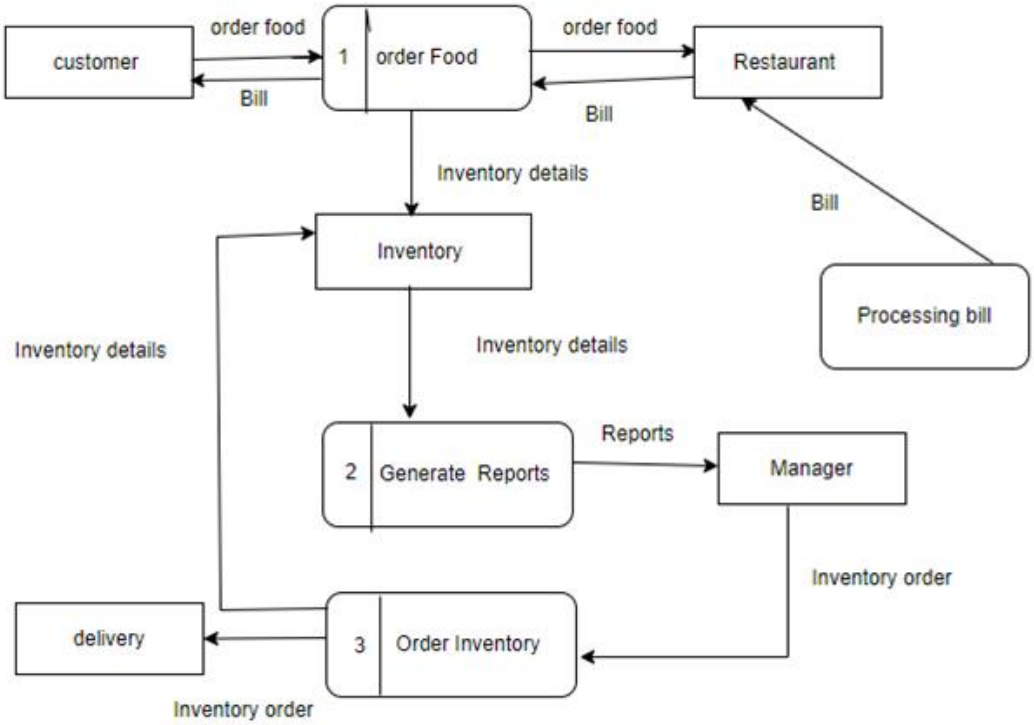
Table-2: Application Characteristics:

S.No	**Characteristics**	**Description**	**Technology**
1	Open-Source Frameworks	List the open-source frameworks used	React Angular, Vue JS for frontend; Django, Flask, Spring Boot, Express JS for Backend
2	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	SHA-256, AES Encryption, OAuth2, JWT, IAM Controls, OWASP Top Ten firewalls, HTTPS, SSL/TLS/SSO
3	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Microservices architecture using Kubernetes, Docker, REST API's, GraphQL, Message Queues
4	Availability	Justify the availability of application (e.g. use of	AWS Elastic Load Balancing, Google Cloud

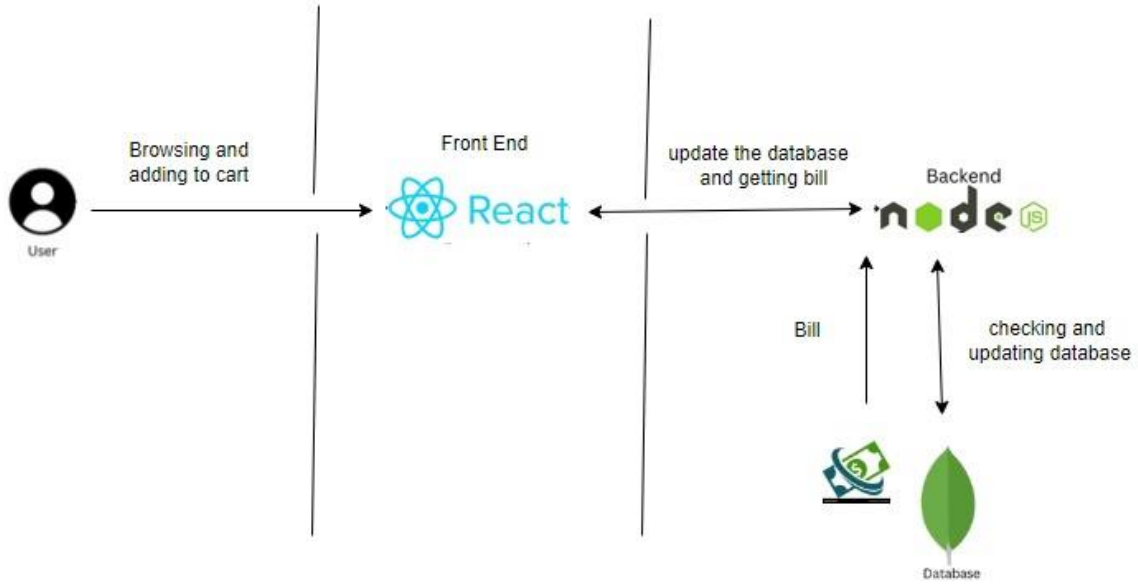
		load balancers, distributed servers etc.)	Load Balancer, Distributed Servers, Failover Clustering, and Auto Scaling (AWS Auto Scaling)
5	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Redis, Memcached for caching, CDNs like Cloud flare, AWS Cloud Front, Nginix, Load Testing Tools
6	Continuous Integration/Continuous Deployment (CI/CD)	Tools and practices for automating the integration and deployment process	Jenkins, GitLab CI, CircleCI, Travis CI, Docker, Kubernetes
7	Monitoring and Logging	Tools and strategies for monitoring application performance and logging	Prometheus, Grafana, ELK Stack, Splunk, New Relic, Datadog
8	Disaster Recovery	Strategies and technologies for disaster recovery and backup	Regular backups, AWS S3, Google Cloud storage, Disaster Recovery Plans, Data Replication
9	DevOps Practices	Integration of development and operations practice for improved workflow	Infrastructure as Code (Terraform, Ansible), Continuous Monitoring, Automated Testing
10	API Management	Tools and techniques for managing APIs (security, rate limiting, analytics)	API Gateways (Kong, Apigee), OAuth2, API Rate Limiting, API Documentation Tools
11	User Experience (UX)	Design Considerations for an intuitive and efficient user interface	Responsive Design, Accessibility Standards (WCAG), User Feedback Tools, A/B Testing
12	Compliance	Ensuring the application meets regulatory and industry standards	GDPR, HIPAA (if dealing with health data), PCI DSS (if dealing with payments) Regular Audits
13	Data Privacy	Measures To protect User data privacy	Data Encryption, Anonymization, User Consent Management, Privacy Policies
14	Real-Time-Features	Implementation of real-time features like chat, notifications, live tracking	WebSockets, Firebase, Pusher, Socket.io

15	Third-Party Integrations	Integrations with third-party services for extended functionalities (e.g. payment gateways)	Stripe, PayPal, Google OAuth, Facebook Login, Twilio (SMS), SendGrid

Data Flow Diagrams:



FLOW:



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
		USN-2	As a user, I can register for the application through Gmail	I can register & access the dashboard with Gmail Login	Medium	Sprint-1
	Login	USN-3	As a user, I can log into the application by entering email & password	I can successfully log in and access my dashboard	High	Sprint-1
	Dashboard	USN-4	As a user, I can view and manage my profile and settings from the dashboard.	I can update my profile and settings from the dashboard	Medium	Sprint-2
		USN-5	As a user, I can view my order history from the dashboard.	I can see a list of all my previous orders	Medium	Sprint-2
Customer (Web user)	Registration	USN-6	As a web 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
	Login	USN-7	As a web user, I can log into the application by entering my email & password.	I can successfully log in and access my dashboard	High	Sprint-1
	Dashboard	USN-8	As a web user, I can view and manage my profile and settings from the dashboard.	I can update my profile and settings from the dashboard	Medium	Sprint-2
		USN-9	As a web user, I can view my order history from the dashboard.	I can see a list of all my previous orders	Medium	Sprint-2

Administrator	Admin Dashboard	USN-10	As an admin, I can promote restaurants and manage categories.	I can update promoted restaurants and category listings	Medium	Sprint-4
		USN-11	As an admin, I can view all user activities and logs.	I can see detailed logs of user activities on the platform	Medium	Sprint-4
		USN-12	As an admin, I can manage user roles and permissions.	I can assign and update user roles and permissions	High	Sprint-4
	Customer Support	USN-13	As an admin, I can view customer queries and issues.	I can see a list of all customer queries and issues	High	Sprint-3
		USN-14	As an admin, I can respond to customer queries and issues.	I can send responses to customer queries	High	Sprint-3
		USN-15	As an admin, I can escalate issues to higher management if needed.	I can mark issues for escalation and notify higher management	Medium	Sprint-3