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

Date	01 November 2023
Team ID	NM2023TMID04531
Project Name	Create a Google My Business Profile

Technical Architecture:

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

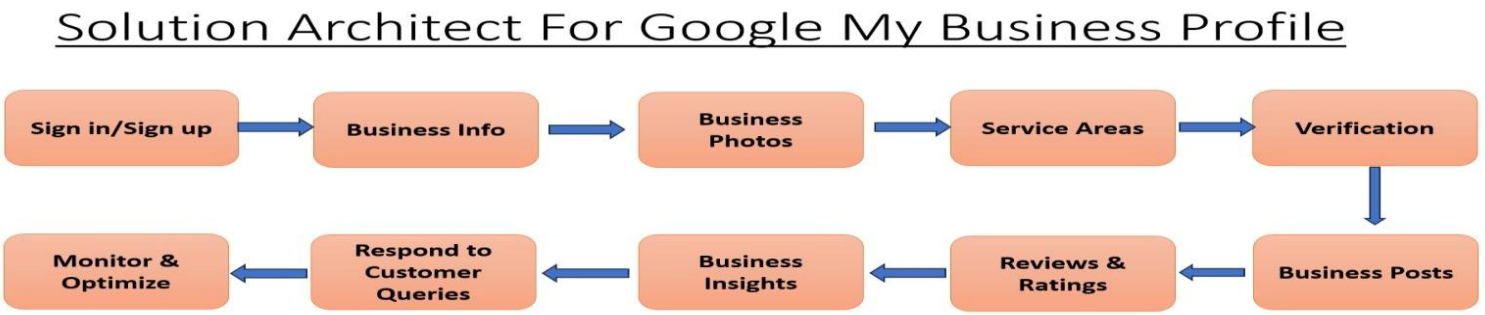

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The frontend layer responsible for the visual representation and interaction with the platform.	HTML, CSS, JavaScript, React, Angular, Vue.js
2.	Backend Server	Manages the server logic, data processing, and responds to frontend requests.	Node.js, Python (Django/Flask), Ruby (on Rails), Java (Spring), .NET
3.	Database	Stores business information, user data, profile details, and other relevant data required for the platform's operation.	MySQL, PostgreSQL, MongoDB, Google Cloud Firestore
4.	Authentication/Security	Ensures secure user access, data protection, and authorization to the Google My Business platform.	OAuth 2.0, JSON Web Tokens (JWT), SSL/TLS, Firewalls, Encryption
5.	Google APIs Integration	Facilitates integration with Google services for managing business profiles, location data, and user identity verification.	Google My Business API, Google Maps API, Google Identity API
6.	Communication Protocols	Enables communication between different layers and systems within the platform.	HTTPS, RESTful APIs, GraphQL
7.	Infrastructure/Hosting	Provides the hosting environment for the platform, ensuring scalability, reliability, and availability.	Google Cloud Platform, AWS, Azure, Heroku, Digital Ocean
8.	Monitoring/Analytics	Collects and analyses user behaviour, interactions, and performance metrics for continuous platform improvement.	Google Analytics, Google Tag Manager, Custom Analytics Tools
9.	Content Delivery Network	Optimizes content delivery, improves site performance, and enhances the user experience.	Cloudflare, Akamai, Amazon CloudFront
10.	DevOps/Deployment Tools	Manages deployment, automation, version control, and infrastructure configuration for efficient development and deployment.	Docker, Kubernetes, Jenkins, Git, Terraform, Ansible

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	User Experience (UX)	Focuses on delivering an intuitive, responsive, and engaging user interface and experience.	UX/UI Testing Tools, A/B Testing
2.	Integration	Enables seamless integration with external systems, services, and data exchange between various components of the application.	APIs (REST, GraphQL), Webhooks, Middleware, ETL Tools
3.	Security	Protects the application from threats, ensuring data privacy, secure user access, and compliance with security standards.	SSL/TLS, Firewalls, Encryption, Multi-Factor Authentication (MFA)
4.	Maintainability	Ensures ease of maintenance, updates, and future development through well-structured code, testing, and comprehensive documentation.	Automated Testing, Documentation
5.	Performance	Ensures fast response times, reduced latency, and optimal performance of the application.	Content Delivery Networks (CDN), Caching Mechanisms, Load Balancing.