

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	02 November 2023
Team ID	NM2023TMID04498
Project Name	Website Creation using Canva

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

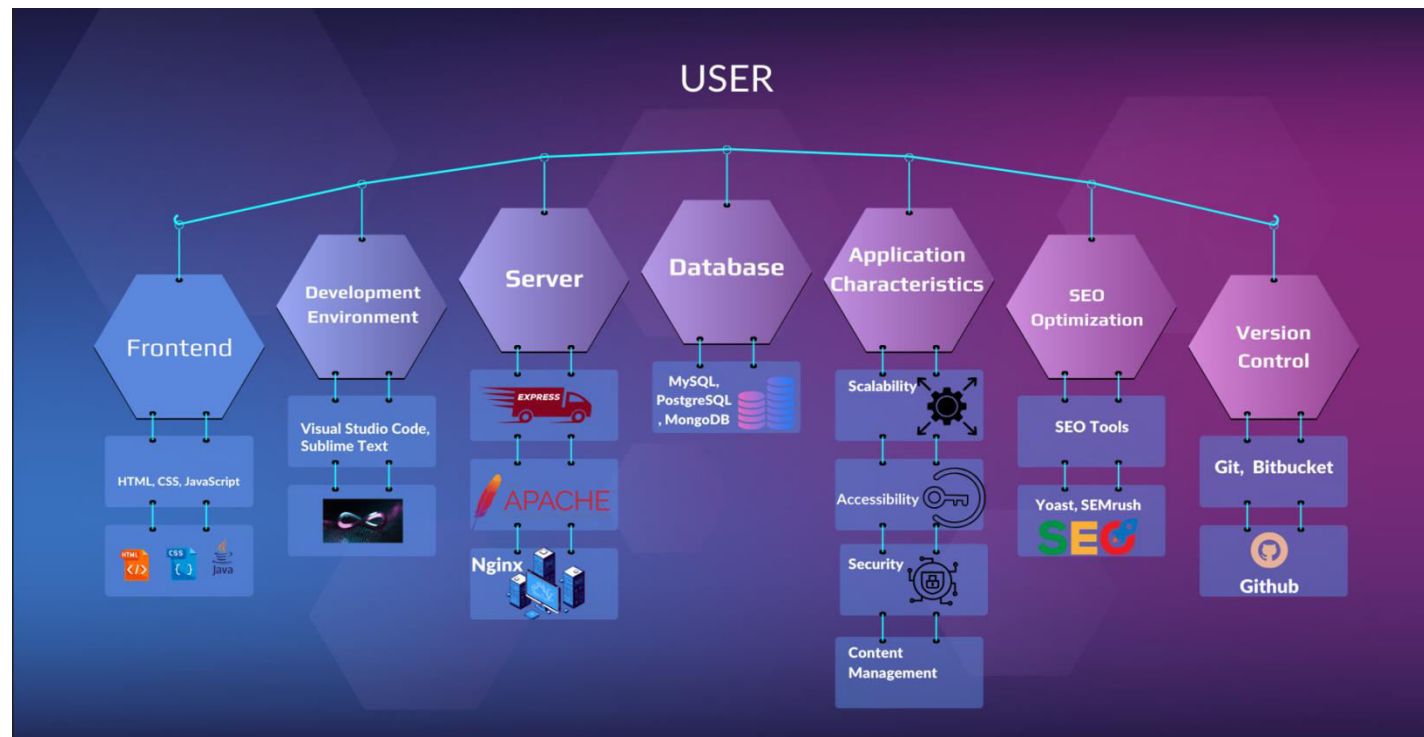


Table-1: Components & Technologies:

Component	Technology	Description
Frontend	HTML, CSS, JavaScript	The user-facing part of the website, responsible for the user interface and interactivity. HTML (Hypertext Markup Language) is used for structuring content, CSS (Cascading Style Sheets) for styling, and JavaScript for interactivity.
Framework	React.js, Angular, Vue.js	JavaScript frameworks that simplify building dynamic and responsive web applications. React.js is a library for creating user interfaces, Angular is a comprehensive front-end framework, and Vue.js is a progressive JavaScript framework.
Backend	Node.js, Ruby on Rails, Python	The server-side of the website that handles data processing and business logic. Node.js is a runtime environment for executing JavaScript on the server, Ruby on Rails is a web application framework written in Ruby, and Python can be used with frameworks like Django.
Server	Express, Apache, Nginx	Server software to manage requests and deliver web content. Express is a minimal Node.js framework, Apache is a widely used open-source server, and Nginx is a high-performance web server.
Database	MySQL, PostgreSQL, MongoDB	Data storage solutions. MySQL and PostgreSQL are relational databases, while MongoDB is a NoSQL database for flexible data storage.
Hosting	AWS, Heroku, Netlify	Platforms where your website is deployed and hosted. AWS (Amazon Web Services) offers cloud hosting, Heroku is a Platform as a Service (PaaS), and Netlify is a popular hosting and automation platform for modern web projects.
Version Control	Git, GitHub, Bitbucket	Tools for tracking changes in your codebase and collaborating with a team. Git is a distributed version control system, while GitHub and Bitbucket are web-based platforms for Git repository hosting.
Development Environment	Visual Studio Code, Sublime Text	Code editors and integrated development environments for writing and managing code. Visual Studio Code and Sublime Text are popular choices for web development.
Testing	Jest, Selenium, Cypress	Testing frameworks and tools for ensuring the functionality and quality of your website. Jest is a JavaScript testing framework, Selenium is used for browser automation testing, and Cypress is an end-to-end testing framework.
Deployment	Docker, CI/CD Tools	Tools and practices for deploying code changes to production and continuous integration/continuous delivery (CI/CD). Docker allows for containerized deployments, and CI/CD tools automate the deployment process.

Table-2: Application Characteristics:

Charateristics	Description	Technology
Responsive Design	HTML, CSS, Media Queries	Creating websites that adapt to various screen sizes and devices. HTML for structuring content, CSS for styling, and media queries for responsive layouts.
Cross-Browser Compatibility	Browser Testing Tools	Ensuring that websites work consistently across different web browsers. Use browser testing tools like BrowserStack or CrossBrowserTesting.
Fast Loading Speed	Content Delivery Networks (CDNs)	Utilizing CDNs to serve website assets (images, scripts, styles) from geographically distributed servers for faster loading times.
User-Friendly Interface	UX/UI Design Principles	Designing with user experience (UX) and user interface (UI) principles to make the website easy to navigate and visually appealing
SEO Optimization	SEO Tools (e.g., Yoast, SEMrush)	Implementing SEO best practices to improve search engine visibility. Tools like Yoast and SEMrush help with on-page optimization and keyword analysis.
Accessibility	WAI-ARIA, A11y Tools	Ensuring that the website is accessible to individuals with disabilities, following Web Content Accessibility Guidelines (WCAG). WAI-ARIA is a standard for accessible web content.
Scalability	Scalable Hosting and Load Balancers	Preparing for increased traffic and resource demands by using scalable hosting solutions and load balancers
Security	HTTPS, SSL/TLS, Web Application Firewalls (WAF)	Protecting the website from security threats by implementing HTTPS, SSL/TLS certificates, and web application firewalls.
Content Management	CMS (e.g., WordPress, Drupal)	Using content management systems to easily create, edit, and manage website content. Examples include WordPress and Drupal.