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

Date	03 November 2023
Team ID	NM2023TMID04589
Project Name	Create a Website using Canva

Technical Architecture:

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

Example: Ordering flowers using a Website

Reference:

https://images.app.goo.gl/wUQ6wxup8UhP4ZGQ7

Diagram:

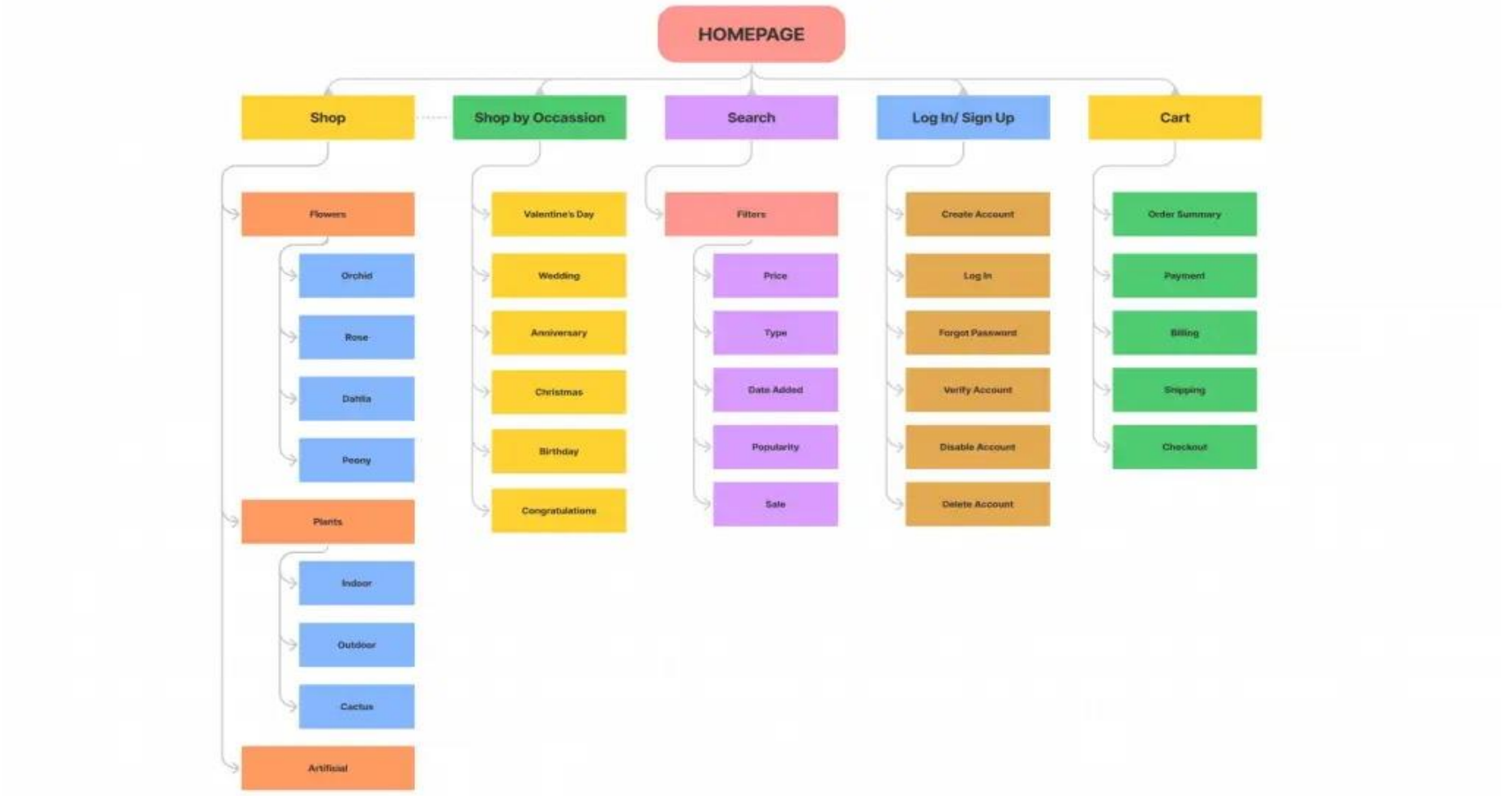
HOMEPAGE
Shop
Shop by Occassion
Search
Log In/ Sign Up
Cart
Flowers
Orchid
Rose
Dahlia
Peony
Plants
Indoor
Outdoor
Cactus
Artificial
Valentine's Day
Wedding
Anniversary
Christmas
Birthday
Congratulations
Filters
Price
Type
Date Added
Popularity
Sale
Create Account
Log In
Forgot Password
Verify Account
Disable Account
Delete Account
Order Summary
Payment
Billing
Shipping
Checkout

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Create a user-friendly web interface for customers to browse, select, and order flowers	HTML, CSS, and JavaScript, and frameworks like React or Angular.
2.	Order Processing	Handles the order processing and management logic, allowing users to select and customize flower arrangements, add to a cart, and place orders.	Node.js, Ruby on Rails, Django
3.	User authentication and account management	Manages user accounts, authentication, and authorization for registered users.	Express.js, Flask, or Spring Security for handling user
4.	Payment Processing	Integrates with payment gateways for secure transaction processing.	E.g., Stripe, PayPal, and a server-side language like Python, Ruby, or Node.js.
5.	Database	Stores essential data such as user profiles, order history, and product information.	e.g., MySQL, PostgreSQL, and NoSQL database (e.g., MongoDB)
6.	Cloud Database	Backup and disaster recovery of critical data from the main database.	Amazon RDS, Google Cloud SQL
7.	File Storage	Stores images and media files related to flower products and user-generated content.	Amazon S3, Google Cloud Storage, or Azure Blob Storage.
8.	Flower Supplier API	Integrates with a flower supplier's API to retrieve real-time product availability and pricing.	RESTful APIs or GraphQL
9.	Geolocation API	Utilizes geolocation services to determine user location for delivery and local flower shop options.	Google Maps API, Mapbox API, or other location-based APIs.
10.	Machine Learning Model(Recommendation Engine)	Provides personalized product recommendations to users based on their browsing and purchase history.	Python with libraries like TensorFlow or sci-kit-learn
11.	Infrastructure (Server / Cloud)	The server infrastructure, either on the cloud or physical servers, hosts the application components and databases.	Cloud providers like AWS, Azure, or Google Cloud, Docker and container orchestration (Kubernetes)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks are software development tools and libraries that are available to the public for free	Web Development, Server Infrastructure, Database Management
2.	Security Implementations	Security implementations encompass practices and technologies used to protect the application and its data from unauthorized access, attacks, and breaches.	Authentication, Encryption, Intrusion Detection
3.	Scalable Architecture	Scalable architecture allows an application to handle increased loads and growing user bases by adding resources or components as needed.	Load Balancing, Microservices, Cloud Computing
4.	Availability	Availability refers to the application's ability to remain operational and accessible to users.	Distributed Databases, Disaster Recovery
5.	Performance	Performance optimization ensures that the application responds quickly to user requests, has low latency, and efficiently utilizes system resources.	New Relic, Prometheus, or Grafana for performance monitoring and optimization.