**CodeSphere Documentation**  
Welcome to **Codesphere**, an innovative platform designed for developers to upload, share, and integrate web templates seamlessly. Whether you're a creator looking to share your templates or a developer searching for new designs, Codesphere provides the tools to make the process smooth and efficient.

One of Codesphere's standout features is its **automatic screenshot generation** during template uploads when a live link is provided. Additionally, users can track the performance of their templates by viewing detailed **template view statistics** using **Chart.js**. The platform also integrates **Razor pay** for seamless donations. Users can also **like templates**, adding a social layer that highlights popular designs.

**Technology Stack**

**Frontend:**

* **React.js**: Used to build a responsive and dynamic user interface with component-based architecture.
* **Tailwind CSS**: A utility-first CSS framework that provides flexibility and rapid development of consistent designs.
* **Chart.js**: Integrated for generating dynamic charts that visualize template views, providing creators with valuable insights on the performance of their templates.

**Backend:**

* **Express.js**: Powers the backend, handling requests, managing sessions, and ensuring smooth API functionality.
* **MongoDB**: Stores user data, templates, view analytics, likes, and donation information. MongoDB is suited for handling unstructured data, while PostgreSQL is optimal for relational data management.
* **Firebase:** Used for storing images on the backend. When users upload templates with screenshots, these images are securely stored in Firebase.

**Deployment:**

* **Vercel**: The platform is hosted and deployed on Vercel for continuous deployment and performance optimization via a global content delivery network (CDN).

**Payment Gateway:**

* **Razor pay**: A secure payment gateway integrated to enable users to donate to the platform or template creators. It supports multiple payment methods including UPI, credit/debit cards, and net banking.

**Key Features**

**1. User Registration and Login:**

* Secure registration and login using **JWT** (JSON Web Tokens) for session management.
* Once logged in, users can upload, like, and track their own templates.

**2. Template Upload and Sharing:**

**Template Upload and Sharing:**

* **Upload Templates:** After logging in, users can upload their web templates. During the upload, users can either provide a live link for automatic screenshot generation or manually upload a screenshot of their template.
* **Bookmark Templates:** Users can bookmark templates they find useful for easy access later. Bookmarked templates are saved in their profile for future reference.
* **Automatic Screenshot**: If a live link is provided during the upload process, the system captures a screenshot of the webpage and displays it as the template's thumbnail.
* **Manual Screenshot Upload**: If a live link is not available, users can manually upload a screenshot to represent their template.
* **Sharing Options**: Users can choose to share templates by providing:
  + A **direct download** of the template’s code.
  + A **GitHub link** to the repository, which is especially useful for version control and collaboration.

**3. Previewing Template Views with Chart.js:**

* **View Analytics**: Codesphere provides users with the ability to preview how many times their templates have been viewed.
* **Dynamic Charts with Chart.js**: Template views are visualized through charts, giving users an easy-to-understand graphical representation of their template's popularity. Users can track view trends over time and gauge the performance of their uploads.

**4. Liking Templates:**

* **Template Likes**: Users can like templates they find useful or visually appealing. This feature helps other users discover popular templates by surfacing templates with higher likes in searches or recommendations.
* **Track Popularity**: Template creators can see how many likes their templates have received in addition to view counts, adding another layer of feedback.

**5. Browsing and Using Templates:**

* **Template Gallery**: Users can browse through templates uploaded by others. Each template includes a screenshot and metadata (title, description, tags, username) for easy filtering and discovery.
* **GitHub Access**: Users can navigate to the template's GitHub repository for further customization and integration into their projects.

**6. Razorpay Donations:**

* **Support Creators and the Platform**: Codesphere integrates Razorpay to allow users to donate directly to support the platform or template creators. This creates a collaborative environment where users can contribute financially.
* **Payment Flexibility**: Razorpay supports a variety of payment methods, making it easy for users around the world to donate.

**7. Admin Controls and Moderation:**

* **Template Review and Approval**: To maintain the quality and ensure compliance with platform guidelines, uploaded templates may be reviewed by admins before being published.
* **Reporting Features**: Users can report templates that violate guidelines, ensuring a safe and community-driven experience.