**Project Design Phase-II**

**Open Source Frameworks**

|  |  |
| --- | --- |
| **Date** | **02 November 2023** |
| **Github name** | **https://github.com/Nareshkumar2001/Naan-Mudhalvan-Salesforce** |
| **Project Name** | A CRM Application For Managing Loan App and Fraudulent Prevention |

**Backend Development:**

Django: A high-level Python web framework that provides a clean and pragmatic design. It's known for its security features and can be used to build the backend of your CRM application.

Ruby on Rails: An open source web application framework for the Ruby programming language. It can be used to build a robust backend for your application.

**Database:**

PostgreSQL: An open source relational database management system known for its robustness, scalability, and support for advanced features.

MySQL: Another popular open source relational database management system, often chosen for its performance and ease of use.

**Frontend Development:**

React: A popular JavaScript library for building user interfaces. It's widely used for creating responsive and interactive frontends.

Angular: A comprehensive JavaScript framework that provides a structured approach to building dynamic web applications.

Vue.js: A progressive JavaScript framework for building user interfaces, known for its simplicity and ease of integration**.**

**Web Server:**

Nginx: An open source web server and reverse proxy server known for its speed, scalability, and security. It's often used to serve web applications and handle client requests.

**Security:**

OWASP: The Open Web Application Security Project offers a wealth of resources, tools, and guidelines for building secure web applications. It's essential to follow their security best practices to prevent fraudulent activities.

**Authentication and Authorization:**

OAuth2: An open standard for secure authorization, often used for user authentication and access control in web applications.

Keycloak: An open source identity and access management solution that provides features for user authentication and authorization.

**Data Analytics and Fraud Detection:**

Apache Spark: An open source big data processing framework that can be used for data analytics and fraud detection tasks.

Scikit-learn: A machine learning library for Python, suitable for building fraud detection models.

**Messaging and Notification:**

RabbitMQ: An open source message broker that can be used for sending notifications and messages to users.

Apache Kafka: A distributed event streaming platform for building real-time data pipelines, which can be used for messaging.

**Reporting and Analytics:**

Apache Superset: An open source data exploration and visualization platform that can be integrated to provide reporting and analytics features.

**Containerization and Orchestration:**

Docker: Containerization technology that simplifies the deployment of applications and services.

Kubernetes: An open source container orchestration platform for automating the deployment, scaling, and management of containerized applications.

**Version Control:**

Git: The widely used version control system for tracking changes in source code and collaborating with development teams.

**CI/CD:**

Jenkins: An open source automation server that can be used for building, testing, and deploying the application as part of a continuous integration and continuous deployment (CI/CD) pipeline.

Using open source frameworks and tools in your CRM application development can be cost-effective and provide a robust foundation for your project. However, it's important to ensure that you have the expertise to configure, customize, and maintain these technologies properly and to follow best practices for security and compliance throughout the development process.