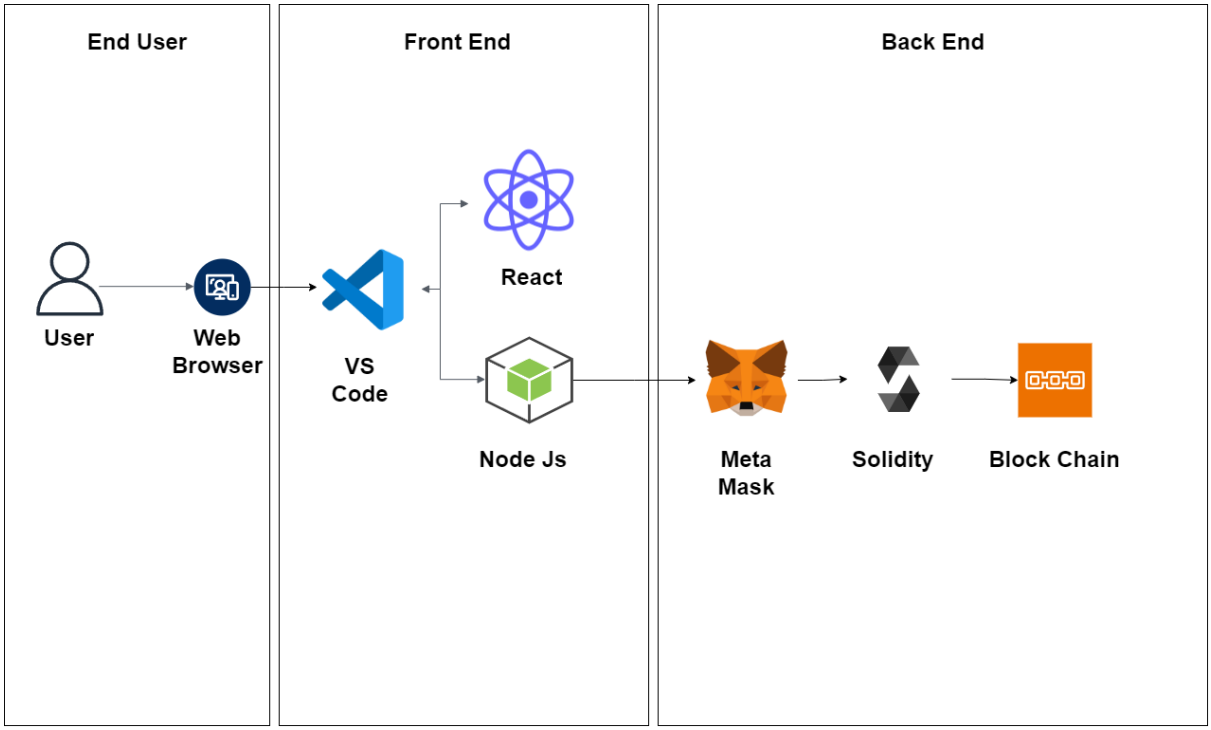
Project Design Phase-I

Solution Architecture

Date	22 September 2023
Team ID	NM2023TMID03981
Project Name	Farmer Insurance Chain
Maximum Marks	4 Marks

Solution Architecture:



Solution architecture Description:

End User:

- This is where users interact with the blockchain application. It can be a web app.
- The voting site can be accessed via the browsers from all the devices by every user.

Front End:

- **User Interface:** Create a user-friendly interface for farmers to interact with the insurance system. This could be a web application or a mobile app.
- Registration and Login: Implement user registration and login functionalities for farmers to access their accounts.
- **Policy Management:** Allow farmers to view and manage their insurance policies

through the front end.

- **Claim Submission:** Provide a feature for farmers to submit insurance claims in case of crop loss or damage.
- **Notifications:** Implement a notification system to keep farmers informed about policy updates and claim statuses.
- **Data Visualization:** Display relevant data and analytics, such as weather information and policy details, to help farmers make informed decisions.

Back End:

- **Smart Contracts:** Develop blockchain-based smart contracts to automate insurance processes, such as policy issuance, premium collection, and claims processing.
- **Distributed Ledger:** Implement a decentralized ledger to store policy data and transaction history securely.
- **Security:** Ensure robust security measures to protect sensitive data and prevent unauthorized access.
- **Consensus Mechanism:** Choose an appropriate consensus mechanism (e.g., Proof of Work or Proof of Stake) for your blockchain network.
- **Integration:** Integrate with external data sources, weather APIs, and oracles to validate and trigger insurance events.
- Payment Processing: Set up payment gateways to handle premium payments and claims disbursements in cryptocurrency or fiat currency.
- **Data Analytics:** Implement data analytics to assess risk factors and pricing for insurance policies.
- **Administration:** Create tools for administrators to manage the system, including policy validation and resolving disputes.
- This project would require collaboration between front-end and back-end developers, blockchain experts, and insurance domain specialists to ensure a robust and user-friendly farmer insurance blockchain system.