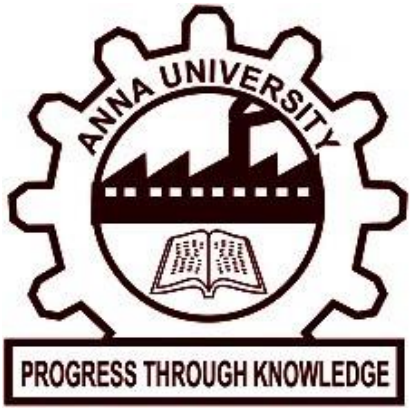
UNIVERSITY COLLEGE OF ENGINEERING KANCHEEPURAM

(A Constituent College Of Anna University, Chennai)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



NAAN MUDHALVAN PROJECT DESIGN PHASE

MICROFINANCING USING BLOCKCHAIN

CANDIDATE DETAILS:

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TEAM NM ID: NM2023TMID00942

Project Design Phase-I

Solution Architecture

Date	30/10/2023

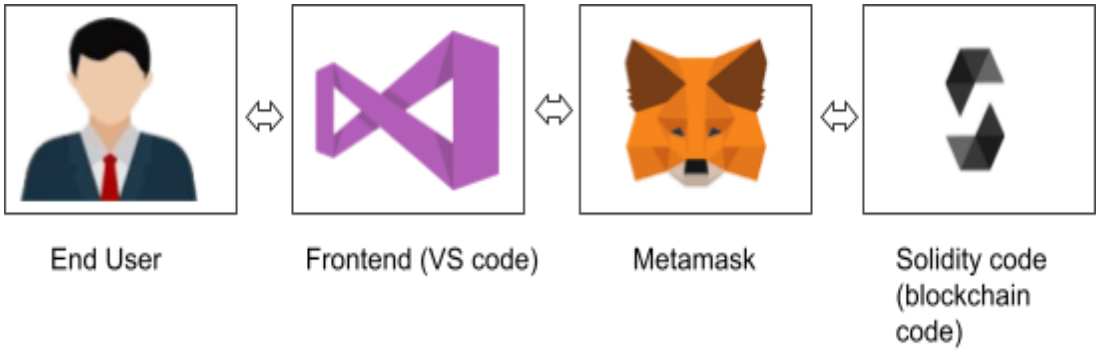
Team ID	**NM2023TMID00942.**
Project Name	**MICROFINANCING USING BLOCKCHAIN**
Maximum Marks	4 Marks

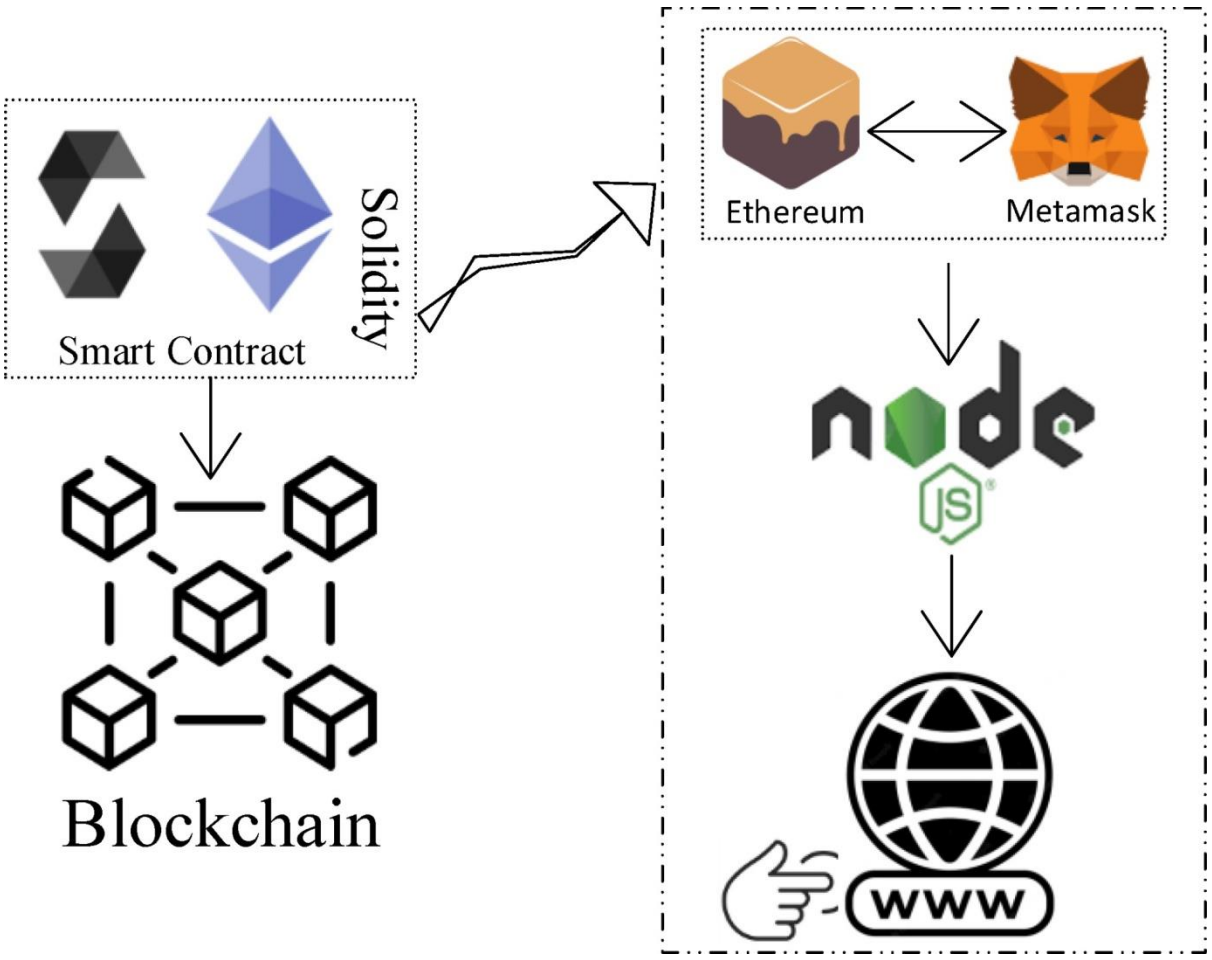
Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Example - Solution Architecture Diagram:





5.2 Solution Architecture

The solution architecture for microfinancing using blockchain is a crucial component in designing a system that offers transparency, security, and efficiency in providing financial services. Here's a high-level overview of the key components and considerations for such an architecture:

Blockchain Infrastructure:
Choose an appropriate blockchain platform (e.g., Ethereum, Binance Smart Chain, Hyperledger Fabric) based on your specific use case and requirements.
Implement the blockchain network, including nodes, consensus mechanisms, and smart contract execution.

User Interface (UI):
Develop a user-friendly front-end application for borrowers, lenders, and administrators to interact with the microfinancing platform.

Payment Integration:
Integrate cryptocurrency wallets or stablecoins for loan disbursement and repayments.
Enable seamless fund transfers between lenders and borrowers.

APIs and Middleware:
Develop APIs and middleware to facilitate communication between the front-end application and the blockchain.
Implement middleware for real-time data processing, validation, and integration with external systems.

Analytics and Reporting:
Incorporate analytics tools to monitor and analyze the performance of the microfinancing platform.
Generate reports on loan portfolio performance, user behavior, and financial metrics.

Governance and Administration:
Implement a governance model for platform management and decision-making.
Include administrative tools for platform administrators to manage users, loans, and system parameters.

Integration with External Systems:
Connect with external financial institutions, credit bureaus, and payment gateways to enhance the platform's capabilities and data sources.

4. Open cmd enter commands

    npm install

    npm bootstrap

    npm start

5. It will install all the packages and after completing it will open {LOCALHOST IP ADDRESS} copy the address and open it to chrome so you can see the frontend of your project.