**Blockchain-Based Supply Chain System Roadmap**

**Project Roadmap**

**Week 1-2: Requirements Gathering**

* Identify stakeholders and system requirements.
* Research blockchain platforms (Hyperledger Fabric vs. Ethereum).
* Document functional and non-functional requirements.
* Assign responsibilities to group members.
* **Responsible Members:** Member 1, Member 2

**Week 2-3: System Design**

* Design system architecture.
* Create system flow diagrams (ERD, Use Case, Sequence Diagrams).
* Design blockchain data model.
* Develop API structure.
* **Responsible Members:** Member 3

**Week 3-5: Blockchain Implementation**

* Set up blockchain network.
* Develop smart contracts for produce registration and transactions.
* Test smart contracts in a local environment.
* Deploy blockchain network.
* **Responsible Members:** Member 4, Member 5

**Week 4-7: Web & Mobile Application Development**

* Develop frontend interfaces for agencies, distributors, and consumers.
* Integrate blockchain APIs into the frontend.
* Develop QR code generation functionality.
* **Responsible Members:** Member 2, Member 3

**Week 5-7: QR Code Generator Integration**

* Implement QR code generation.
* Connect QR codes with blockchain transaction data.
* **Responsible Members:** Member 6

**Week 7-8: Testing & Debugging**

* Perform unit and integration testing.
* Identify and fix software bugs.
* Optimize system performance.
* Finalize user interface.
* **Responsible Members:** Member 1, Member 4

**Week 8: Documentation & Deployment**

* Write technical documentation.
* Deploy application on AWS EC2.
* Prepare user manual.
* **Responsible Members:** Member 6

**Milestones**

| **Milestone** | **Deadline** | **Responsible Members** |
| --- | --- | --- |
| Requirements Finalized | End of Week 2 | Member 1, Member 2 |
| System Design Completed | End of Week 3 | Member 3 |
| Blockchain Network Deployed | End of Week 5 | Member 4, Member 5 |
| Web & Mobile App MVP | End of Week 7 | Member 2, Member 3 |
| QR Code Functionality Completed | End of Week 7 | Member 6 |
| System Testing Completed | End of Week 8 | Member 1, Member 4 |
| Final Documentation | End of Week 8 | Member 6 |

**Conclusion**

This roadmap outlines the phased approach for developing the **Blockchain-Based Supply Chain System** with clearly defined timelines and responsibilities. The distribution of tasks ensures efficient collaboration and timely delivery of the MVP.