TITLE PAGE

- **Problem Statement ID – 1589**
- **Problem Statement Title- STUDENT INNOVATION**
- **Theme- Blockchain & Cybersecurity**
- **PS Category- Software**
- **Team ID- 23706**
- **Team Name – 5G Only*11**

5G
Only*11

IDEA TITLE

SMART INDIA HACKATHON 2024

❖ Proposed Solution (Web3-Based Cab BOOKING APP)

Solution Overview

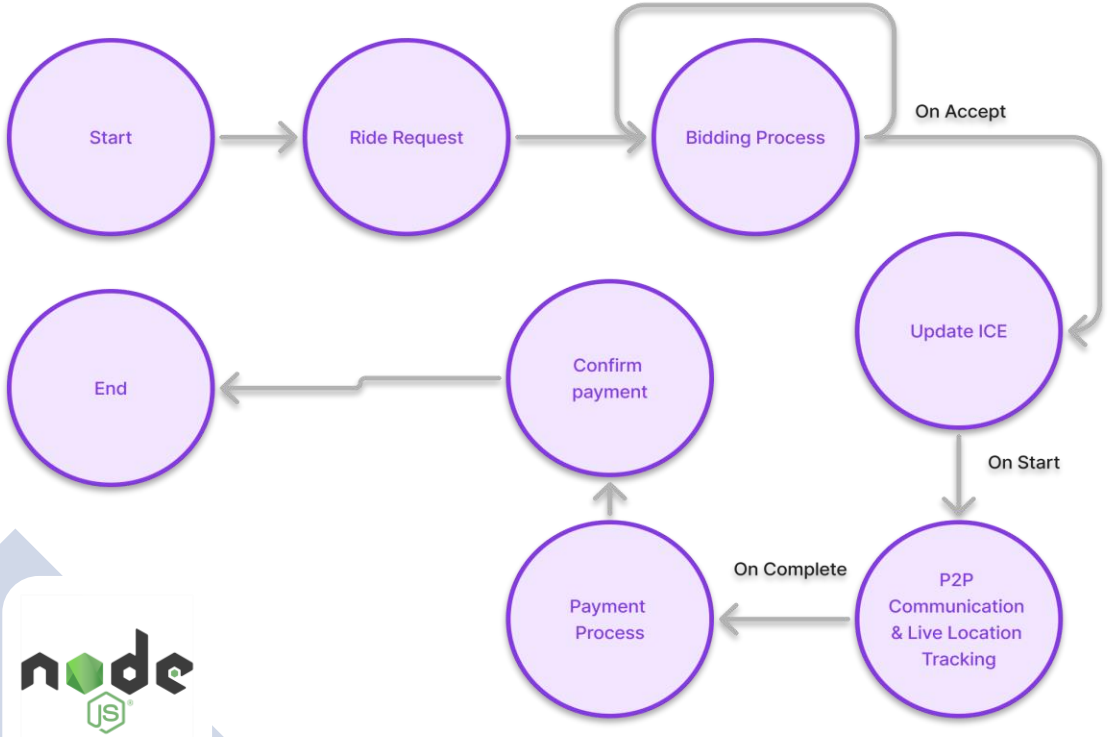
Problem Addressed:

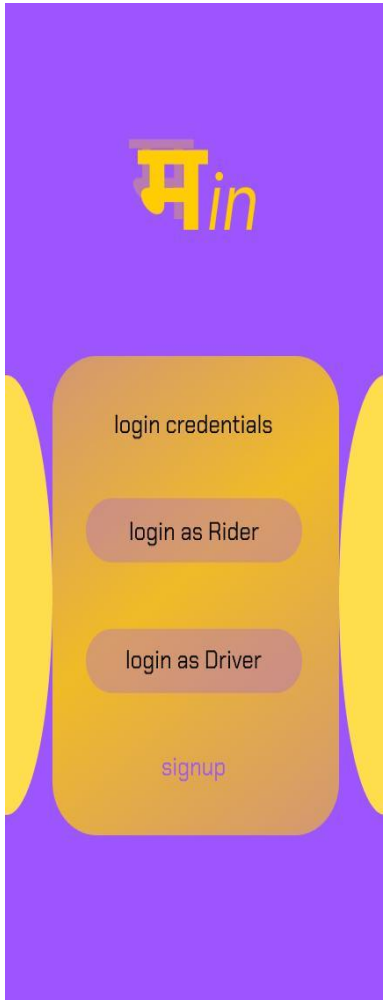
- **Lower Costs:** Eliminates high commissions, reducing ride costs.
- **Higher Driver Earnings:** Drivers keep nearly the full fare.
- **Increased Security:** Transparent, tamper-proof transactions.

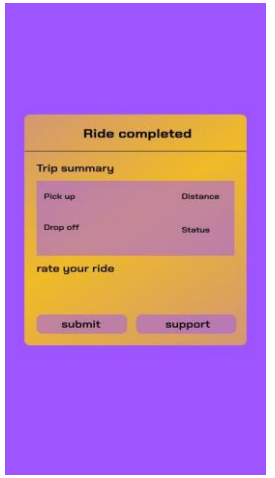
5G
Only*11

TECHNICAL APPROACH

SMART INDIA HACKATHON 2024







5G
Only*11

IMPACT AND BENEFITS

SMART INDIA HACKATHON 2024

Potential Impact on Target Audience:

Empowers Users: Direct connections between riders and drivers, eliminating middlemen.

Lower Costs: Reduced ride prices due to no commissions

Benefits:

Economic: Higher earnings for drivers, lower costs for riders.

Social: Promotes fairness and transparency in ride-sharing.

Environmental: Efficient ride matching could reduce idle driving, lowering emissions.

5G
Only*11

FEASIBILITY AND VIABILITY

SMART INDIA HACKATHON 2024

Feasibility

- **Technical Feasibility:** Blockchain and smart contract technology are mature enough for implementing decentralized ride-sharing platforms.
- **Market Demand:** Growing interest in Web3 and decentralization could attract early adopters, especially in tech-savvy regions.

Potential Challenges & Risk:

- **High Gas Fees:** Transaction costs on popular blockchains can be high, affecting affordability.
- **User Adoption:** Transitioning users from familiar apps to a decentralized platform may be slow.
- **Regulatory Hurdles:** Compliance with local regulations and ride-sharing laws could be complex.
- **Security Concerns:** Smart contract vulnerabilities could be exploited if not properly audited.

Strategies for Overcoming Challenges:

- **Layer 2 Solutions:** Utilize Layer 2 scaling solutions (e.g., Polygon) to reduce gas fees.
- **User Education & Incentives:** Offer tutorials and incentives for early users to ease the transition.
- **Legal Consultation:** Engage with legal experts to ensure compliance in target markets.
- **Thorough Audits:** Conduct regular smart contract audits to ensure security and build user trust.

5G
Only*11

RESEARCH AND REFERENCES

SMART INDIA HACKATHON 2024

1. **Blockchain in Ride-Sharing:**
   - Research on Blockchain-based Decentralized Ride-Sharing Systems - This paper discusses the implementation and benefits of blockchain in ride-sharing.
2. **Smart Contracts & Decentralization:**
   - Ethereum Whitepaper - Detailed insights into smart contracts, decentralization, and blockchain fundamentals.
3. **Gas Fees and Layer 2 Solutions:**
   - Understanding Gas Fees on Ethereum - Information on how gas fees work and strategies for reducing them.
   - Layer 2 Scaling Solutions - Explains how Layer 2 solutions can lower transaction costs.
4. **Security in Blockchain Applications:**
   - Smart Contract Security Best Practices - A guide to securing smart contracts in blockchain-based applications.
5. **Decentralized Reputation Systems:**
   - Reputation Systems in Blockchain - Academic paper discussing decentralized reputation mechanisms.
6. **Market Adoption of Decentralized Apps:**
   - DApp Market Analysis - Analysis of user adoption trends in decentralized applications.