Capstone Letter of Intent (LOI)

I. Project Overview

- **Capstone Project Name/Idea**: Freelunch - pay now free later payment gateway utilising smart contract on solana blockchain.
- **Brief Project Description**: Freelunch is a decentralized payment gateway built on the Solana blockchain that allows users to purchase goods or services through a pay first get back later or instant rebate model. Merchants can integrate into their payment systems to offer customers seamless and low-cost payment options.
- **Reason for Choosing this Project**: The traditional payment systems, particularly recent BNPL models, often charges merchant high fees, slow transactions, and lack of transparency. I aim to address these pain points by leveraging the speed and scalability of Solana Blockchain. As a blockchain enthusiast, I'm excited about the potential of decentralized finance (DeFi) in providing more flexible, cost-efficient, and transparent payment solutions. This project not only explores the capabilities of blockchain technology but also has the potential to disrupt the consumer finance industry, empowering users with greater control over their purchases and payment plans.

II. Go-to-Market Strategy

- **Target Audience**:
  - **Consumers**: Individuals looking for a delayed gratitude in terms of spending. Individual who doesn’t want to sell their asset because they’re bullish on it or for tax reason but want to use their asset to purchase.
  - **Merchants**: E-commerce platforms, retailers, and looking to integrate alternative payment systems into their existing platforms.
- **Value Proposition**:
  - **For Consumers**: Provides an easy way to purchase products or services with more payment option to help with their consumer behavior.

    - **For Merchants**: Merchants can offer alternative payment methods that attract more customers, drive sales, and improve customer retention through flexible payment options.
- **Marketing and Distribution**:
    - **Partnerships**: Collaborate with e-commerce platforms, payment gateways, and merchants to onboard them onto the PayFi system.
    - **Influencer Partnerships**: Work with influencers in the crypto and blockchain space to increase visibility.
    - **Community Engagement**: Participate in blockchain-related forums, hackathons, and conferences to build awareness and credibility.
- **Competitive Landscape**: There are other BNPL solutions in the market, such as Atome(web2) and Huma finance (web3) . The terms BNPN or PayFi is still relatively new in solana.
    - **Decentralization**: Utilizing Solana's blockchain to eliminate intermediaries and reduce transaction fees.
    - **Transparency**: Offering a clear, auditable record of all transactions and payment schedules.
    - **Smart Contract Automation**: Handling all aspects of payment management through automated smart contracts.
    - **Low Fees**: Leveraging Solana’s scalability and low fees to pass on savings to both consumers and merchants.
    - **Proof of revenue**: For business who want to tokenise their future revenue, the data can be found on chain.

III. Technical Details

- **Tech Stack**:
    - **Blockchain Platform**: Solana
    - **Smart Contract Language**: Rust (using the Anchor framework)
    - **Frontend Framework**: NextJS
- **Smart Contract Development**:
    - **Language**: Rust, using the Anchor framework to write secure and efficient smart contracts.

    - **Testing**: Unit testing for individual smart contract functions.
    - Integration with other DeFi platform to stake and generate yield

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- **Project Timeline**:
    - **Week 1**: (Jan 21st - Jan 27th)
        - Create detailed user stories for both consumers and merchants. (submission deadline Jan 28th)
        - Begin primary research on the BNPN structure on staking with yield generation.
    - **Week 2 (Jan 28th - Feb 3rd)**:
        - Drafting arc diagram
        - Develop initial program based on user stories
        - Develop initial UI/UX wireframes for both consumers and merchants.
    - Week 3 (Feb 4th - Feb 10th)
        - Continue building out core program features
        - Develop API endpoints for integrating the frontend with Solana smart contracts.
        - Build initial test suite
    - Week 4 (Feb 11th - Feb 17th)
        - Test and debug
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        - Build initial test suite
- Week 5 & 6 (Feb 18th - Feb 24th)
    - Deployment to devnet
    - Pitch deck preparation and finalisation
    - Demo day rehearsal

Week 4: (Feb 11th - Feb 17th)

- **Testing & Debugging**:

- Perform unit testing of smart contracts on the Solana Devnet.
- Integrate automated testing for the backend APIs and frontend interactions.
- Conduct integration testing between smart contracts, backend, and frontend.
- Test user workflows and interfaces for usability and edge cases.
- Begin security audits on the smart contracts for vulnerabilities.

Week 5: (Feb 18th - Feb 21st)

- **Smart Contract Deployment on Solana Devnet**:
  - Finalize and deploy the smart contracts to the Solana Devnet.
  - Perform thorough validation of transactions, subscription handling, and payment flows.
  - Ensure the backend interacts smoothly with Solana smart contracts on the Devnet.
- **Frontend Development**:
  - Begin development of the frontend interface for consumers and merchants.
  - Ensure the interface can handle account creation, payment options, subscription management, etc.
  - Refine UI/UX based on feedback from internal testers.

Commitment:

I am fully committed to completing this project and delivering a prototype. I am excited to contribute to the blockchain ecosystem and demonstrate how blockchain technology can transform the way people engage with payment systems. It is also my personal passion to experiment with things, since it is an entirely new paradigm that will reshape consumer as well as merchant behavior.

Initials: David Jian