Assignment 2: User Stories & On-Chain Requirements

Manual User Brainstorming

Direct Users

- Crypto-Native Seeker
- "Wellness-First, Crypto-Curious" Adopter
- Wellness Community Builders:
 - meditation teacher
 - life coach
 - wellness influencer/content creator
- Corporate Wellness Program Manager
 - o HR director
 - Corporate wellness consultants

Indirect Users/Beneficiaries

- Individuals learning to meditate
- Wellness community members
- Researchers on meditation can see the anonymous data on how and where people are meditating
- Employees in corporate wellness programs
- Companies benefit from employees that are better adjusted

Administrators/Moderators

- Developer configures the Solana programs
- Community moderators enforce community rules and aid in reputation system
- Wellness Community Builders moderate their own communities

Stakeholders

- Solana mobile brings users to the Solana Seeker phone
- Meditators and spiritual seekers

SOL Journey Top Users

1. Individuals Learning to Meditate

• Rationale: This group represents the core problem the project aims to solve. While the other user types define market segments, this group defines the need. The POC must prove that the blend of financial incentives and spiritual practice actually helps these individuals build and maintain a meditation habit. Their feedback is vital to confirm that the dApp is not just a novel financial tool, but an effective wellness toolkit, which is the heart of the value proposition.

Core Function Mapping

Onboarding and Goal Setting:

- Create a Plan: Define their meditation goals, such as frequency (e.g., 5 times a week) and duration (e.g., 10 minutes per session).
- Simplified Setup: Go through a quick, non-technical tutorial on how the app helps them stick to their plan.
- Stake Crypto: Stake crypto to start the plan from the first step

Core Practice Loop:

- Start a Session: Initiate a meditation session.
- Practice Meditation: Use the in-app timer to track meditation session.
- Confirm Completion: Attest that they have completed the session. This is the key action that interacts with their commitment stake.
- Private Journaling: Record thoughts and reflections in a private, encrypted journal after each session to track their inner journey.

Tracking and Motivation:

- View Progress: Check a personal dashboard to see their streak, total meditation time and rewards earned.
- Community Feed: See an anonymous global feed of others who are currently meditating or have recently finished, creating a sense of shared, collective effort

Core PoC Requirements

1. Technical Requirements for the "Core Practice Loop"

This is the most critical interaction, as it combines the wellness activity with the on-chain "Commit-to-Earn" mechanic.

Solana Program (Smart Contract):

- State Management: Needs a program to create and manage a SoloPool account for each user. This account will store the user's plan details (e.g., , ,) and track their progress (status,).
 - stake_amount``daily_goal_minutes``challenge_duration``completion_rate
- Staking Function: An instruction () that allows a user to define their meditation plan and transfer their stake (e.g., SOL) into a Program-Owned Account. create solo pool
- Attestation Function: A core instruction () that a user calls to confirm a completed meditation session. This function must contain the logic to verify that the user is part of an active challenge and to update their progress, submit attestation
- Reward/Claim Logic: A basic instruction () to calculate and release a portion of the staked funds back to the user upon a successful attestation. For a POC, this can be a simple, proportional release. claim_solo_rewards

Frontend Application (Next.js/React):

- Wallet Integration: Must connect to a Solana wallet (e.g., Phantom, Solflare) using libraries like @solana/wallet-adapter. This is non-negotiable, as it's required to sign all on-chain transactions.
- UI for Plan Creation: A simple form where users can input their desired stake amount and meditation goal (duration/frequency). This will be used to call the instruction. create_solo_pool
- Meditation Timer: A basic, time-based component in the UI. When the timer completes, it should enable the "Confirm Completion" button.
- Interaction with Program: The frontend must be able to serialize instruction data and send transactions to the Solana program to call the function when the user confirms a session. submit attestation

Data and Privacy:

 Client-Side Encryption for Journal: To implement the private journal, the application must use the user's wallet to generate a key to encrypt journal entries before they are stored.
 The wallet signature can be used for this, ensuring only the user can decrypt their own entries. Local or Decentralized Storage: For the POC, journal entries can be stored simply in the browser's localStorage. For a more robust solution, a decentralized storage option like Shadow Drive could be used, with access gated by the user's wallet.

2. Technical Requirements for "Tracking and Motivation"

This interaction focuses on providing feedback to the user to keep them engaged.

Frontend Application (Next.js/React):

- Read On-Chain State: The UI needs to query the user's SoloPool account from the Solana blockchain. It will use the user's public key to find their specific account.
- Personal Dashboard: A component that parses the on-chain data (, , etc.) and displays it
 in a user-friendly way (e.g., "You've earned X rewards," "Your streak is Y days").
 stake amount``rewards claimed
- Global Feed (Simplified): For a POC, this doesn't need to be complex. It can be a simple
 "Recent Activity" list that reads the last few transactions from the blockchain and
 displays the (anonymous) public key of the user who completed a session. This
 demonstrates the community aspect without requiring a centralized database.
 submit_attestation

User Stories

- User Story: "User creates a new meditation plan."
 - Account to hold the meditation plan including duration, frequency, rewards and penalty for missing
 - How many weeks will the plan run? (1-4)
 - How many times within a day they commit to meditate? (1-4)
 - How long is each meditation in minutes? (5 >= I <= 60)
 - Vault to hold commitment stake
 - Limited to under \$500 for PoC
 - DeFi rewards come from Lulo, so sell toke for Lulo token and hold in vault
 - Penalty for the PoC is to donate to charity init charity vault if needed
- User Story: "User submits meditation attestation"
 - o Validations:
 - Session duration >= commitment duration
 - Have not completed all sessions for the current 24-hour period
 - Update meditation account to release rewards for each session and update the total released
 - Simple percentage calculation for the PoC

- User Story: "User claims rewards"
 - Validations:
 - For PoC, rewards can only be claimed when the meditation plan is complete
 - Convert stake from Lulo back into original token
 - Send to user's wallet
 - Send penalties for missed sessions to community charity vault
 - Query for attestation transactions to compile final totals for meditation plan
 - o Total rewards
 - Total penalties
 - o Total interest earned

Assignment 2: Appendix

Al-Assisted User Prioritization

Me

My project's value proposition is:

SOL Journey is a web3 spiritual wellness toolkit that uniquely blends financial incentives with personal growth. By

enabling users to stake their own assets on Solana, the dapp creates a powerful commitment mechanism for spiritual

practices like meditation. Additionally, users can take advantage of their own biometrics to level up their meditation

practice. Users not only earn tangible rewards and DeFi yield for their discipline but also benefit from a private,

on-chain record of their journey and a supportive community of fellow travelers. Users can show off their spiritual

experience through their soul-bound NFT and reputation score over time.

Here is a brainstormed list of all potential user types:

Direct Users
Crypto-Native Seeker
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Wellness Community Builders:
meditation teacher
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Researchers on meditation - can see the anonymous data

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Employees in corporate wellness programs

	Companies benefit from employees that are better
adjusted	
	Administrators/Moderators
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in reputation system	·
	Wellness Community Builders moderate their own
communities	
	Stakeholders
	Solana mobile - brings users to the Solana Seeker phone
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Based on the value proposition, which 2-5 of these user types are the most critical to focus on for an initial Proof-of-Concept? For each user you recommend, provide a brief rationale explaining why they are essential for proving the project's core value.

Al Assistant

Based on your project's value proposition, here are the 3 user types most critical for an initial Proof-of-Concept (POC), along with the rationale for each:

2. The Crypto-Native Seeker

Rationale: This user is essential for proving the fundamental "Commit-to-Earn" mechanic. As active Solana users, they face the lowest friction in testing the core feature: staking assets to incentivize meditation. They already have the necessary wallets and technical understanding. Validating that this group will engage with the dApp is the most critical first step; if they don't find it compelling, it's unlikely that users less familiar with crypto will.

3. The "Wellness-First, Crypto-Curious" Adopter

• Rationale: This user is crucial for proving the project's potential to grow beyond the existing crypto niche. Successfully onboarding even a few of these users demonstrates that the value proposition—earning rewards for a wellness habit and guaranteeing data privacy—is strong enough to overcome the initial hurdles of Web3. They validate the "hook" of the project and its potential for broader market appeal.

4. Individuals Learning to Meditate

Rationale: This group represents the core problem the project aims to solve.
 While the other user types define market segments, this group defines the *need*.
 The POC must prove that the blend of financial incentives and spiritual practice

actually helps these individuals build and maintain a meditation habit. Their feedback is vital to confirm that the dApp is not just a novel financial tool, but an effective wellness toolkit, which is the heart of the value proposition.

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For a project with this value proposition in the @selection, and focusing on these prioritized user types

Top Users for PoC

- Individuals Learning to Meditate

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segments, this group defines the need. The POC must prove that the blend of financial incentives and spiritual practice

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, help map out the key functions or interactions each user would need to perform.

My Analysis of the Al Response

This list of users is what I would have suggested as well. I want to focus on the core mechanic of encouraging meditation through financial incentives to see if users find that helpful. Based on this feedback, we can pivot the dapp to help people learning meditation. If this core mechanic works well for these individuals, then it's likely that it will work for other users like wellness community builders or corporate program managers. Focusing on individual users can also aid in evaluating other aspects of the app like private journaling and sharing your success with the larger community of meditation practitioners.

Al Assistant

Of course. Here is a map of the key functions and interactions each prioritized user would need to perform, based on the project's value proposition.

1. Individuals Learning to Meditate

This user is focused on the core wellness loop. Their primary goal is to build a consistent and effective meditation habit

Onboarding and Goal Setting:

- Create a Plan: Define their meditation goals, such as frequency (e.g., 5 times a week) and duration (e.g., 10 minutes per session).
- Simplified Setup: Go through a quick, non-technical tutorial on how the app helps them stick to their plan.

• Core Practice Loop:

- Start a Session: Initiate a meditation session, perhaps choosing between guided or unguided timers.
- **Practice Meditation:** Use the in-app timer and tools to complete their meditation.
- Confirm Completion: Attest that they have completed the session. This is the key action that interacts with their commitment stake.
- Private Journaling: Record thoughts and reflections in a private, encrypted journal after each session to track their inner journey.

Tracking and Motivation:

 View Progress: Check a personal dashboard to see their streak, total meditation time, and rewards earned. Community Feed: See an anonymous global feed of others who are currently meditating or have recently finished, creating a sense of shared, collective effort.

2. The Crypto-Native Seeker

This user is focused on the novel "Commit-to-Earn" mechanic and the integration with the Solana ecosystem. Their primary goal is to use their existing assets to drive personal growth.

Wallet and Staking:

- Connect Wallet: Connect their existing Solana wallet (e.g., Phantom) to the dApp.
- **Create Commitment Stake:** Deposit SOL or other tokens into the smart contract to fund their spiritual plan.
- Activate DeFi Yield: Opt-in to have their staked assets deployed into an integrated DeFi protocol to earn yield while they are committed.

• On-Chain Interactions:

- Attest On-Chain: Execute the on-chain transaction to confirm a completed meditation, which triggers the smart contract to release a portion of their stake back to them as a reward.
- Monitor Rewards: Track the rewards unlocked from their stake and the yield earned from DeFi.
- View On-Chain Record: See their immutable history of attestations on the Solana blockchain, representing their journey.

Reputation and Identity:

- Mint Soul-Bound NFT: Claim their unique, non-transferable NFT that levels up and evolves as they maintain their practice.
- Track Reputation: Watch their reputation score increase with their consistency and achievements.

3. The "Wellness-First, Crypto-Curious" Adopter

This user is attracted by the promise of earning rewards for a healthy habit and data privacy, but they are new to Web3. Their journey must be simple and abstract away the technical complexity.

Simplified Onboarding:

- Easy Wallet Creation: Create a new Solana wallet with a simple method, possibly through social login or email, with clear instructions on how to secure it.
- Guided Funding: Use a simple, integrated fiat-on-ramp (like MoonPay or Stripe) to purchase the necessary crypto and fund their commitment stake directly within the app.

Abstracted Financial Interactions:

- User-Friendly Staking: Interact with a feature framed as a "Motivation Deposit" or "Commitment Fund" rather than "staking." The dApp would handle the technical details in the background.
- Clear Value Proposition: The interface would constantly reinforce the benefits:
 "Earn back your deposit by meditating" and "Your private data is secured by your wallet, not by us."

• Core Wellness and Privacy:

- Full Access to Wellness Tools: Use the same meditation timers, goal-setting features, and journaling as all other users. The wellness experience is paramount.
- Privacy Controls: Easily understand and manage what data is shared and what remains completely private and encrypted.

Me

Based on these top 1-2 critical user interactions in the @selection , what are the key technical requirements needed to build a proof-of-concept?

Al Assistant

Of course. Based on the critical user interactions you've highlighted, here are the key technical requirements for a Proof-of-Concept (POC), focusing on the two most essential loops:

1. Technical Requirements for the "Core Practice Loop"

This is the most critical interaction, as it combines the wellness activity with the on-chain "Commit-to-Earn" mechanic.

• Solana Program (Smart Contract):

State Management: Needs a program to create and manage a SoloPool account for each user. This account will store the user's plan details (e.g., , ,) and track their progress (status,).
 stake_amountdaily_goal_minuteschallenge_durationcompletion_r ate

- Staking Function: An instruction () that allows a user to define their meditation plan and transfer their stake (e.g., SOL) into a Program-Owned Account. create_solo_pool
- Attestation Function: A core instruction () that a user calls to confirm a completed meditation session. This function must contain the logic to verify that the user is part of an active challenge and to update their progress.
 submit_attestation
- Reward/Claim Logic: A basic instruction () to calculate and release a portion of the staked funds back to the user upon a successful attestation. For a POC, this can be a simple, proportional release. claim_solo_rewards

• Frontend Application (Next.js/React):

- Wallet Integration: Must connect to a Solana wallet (e.g., Phantom, Solflare)
 using libraries like @solana/wallet-adapter. This is non-negotiable, as it's
 required to sign all on-chain transactions.
- UI for Plan Creation: A simple form where users can input their desired stake amount and meditation goal (duration/frequency). This will be used to call the instruction. create_solo_pool
- Meditation Timer: A basic, time-based component in the UI. When the timer completes, it should enable the "Confirm Completion" button.
- Interaction with Program: The frontend must be able to serialize instruction data and send transactions to the Solana program to call the function when the user confirms a session. submit_attestation

Data and Privacy:

- Client-Side Encryption for Journal: To implement the private journal, the
 application must use the user's wallet to generate a key to encrypt journal entries
 before they are stored. The wallet signature can be used for this, ensuring only
 the user can decrypt their own entries.
- Local or Decentralized Storage: For the POC, journal entries can be stored simply in the browser's localStorage. For a more robust solution, a decentralized storage option like Shadow Drive could be used, with access gated by the user's wallet.

2. Technical Requirements for "Tracking and Motivation"

This interaction focuses on providing feedback to the user to keep them engaged.

• Frontend Application (Next.js/React):

 Read On-Chain State: The UI needs to query the user's SoloPool account from the Solana blockchain. It will use the user's public key to find their specific account.

- Personal Dashboard: A component that parses the on-chain data (, , etc.) and displays it in a user-friendly way (e.g., "You've earned X rewards," "Your streak is Y days"). stake_amountrewards_claimed
- Global Feed (Simplified): For a POC, this doesn't need to be complex. It can be
 a simple "Recent Activity" list that reads the last few transactions from the
 blockchain and displays the (anonymous) public key of the user who completed a
 session. This demonstrates the community aspect without requiring a centralized
 database. submit_attestation

By focusing on these requirements, the POC can effectively validate the core value proposition: using real assets to create a powerful commitment mechanism for meditation, all while respecting user privacy.

Me

Review my core user functions/stories and requirements in @file:User Stories & On-Chain Requirements.md. Considering my project's refined value proposition in the @selection, do these stories truly hit the mark? Are the requirements granular enough to map to specific technical components (e.g., database schemas, API endpoints, specific blockchain programs)? What's missing or unclear?

Al Assistant

Excellent questions. Here is a detailed review of your file against your project's value proposition. User Stories & On-Chain Requirements.md

Overall, this is a strong document that lays a solid foundation for a Proof-of-Concept (POC). The requirements are logical and follow the user's journey. However, we can refine them to better align with the unique differentiators in your value proposition and increase their technical specificity.

Do the Stories Truly Hit the Mark?

For the most part, **yes**. The core function mapping correctly identifies the fundamental loop of the application: Set Goal -> Stake -> Practice -> Attest -> Track. This directly addresses the "financial incentives" and "commitment mechanism" parts of your value proposition.

However, the stories **partially miss the mark** on some of the more advanced and unique aspects of your value proposition, which could be critical differentiators even in a POC:

- **DeFi Yield:** The value proposition explicitly mentions users earning "DeFi yield." The current user stories do not include an interaction for opting into or tracking this. This is a key feature that separates your project from non-crypto commitment apps like StickK.
- **Biometrics:** Using biometrics is highlighted as a way to "level up" the meditation practice. While likely a post-POC feature, its absence from the requirements means the initial technical architecture might not be designed to accommodate it later.
- **Community and Reputation:** While a "Community Feed" is mentioned, the richer concepts of "soul-bound NFT" and "reputation score" are missing. These are central to the long-term vision of making the user's journey visible and rewarding.

Are the Requirements Granular Enough?

The requirements are at a **good starting level of granularity**, but they could be more specific to prevent ambiguity during development.

Good Granularity:

- The breakdown into Solana Program, Frontend Application, and Data and Privacy is excellent.
- Identifying specific program instructions (,) is very clear and maps directly to functions in an Anchor program. create_solo_poolsubmit_attestation
- Specifying frontend libraries (@solana/wallet-adapter) and storage strategies (localStorage) provides direct technical guidance.

• Areas for Improvement:

- Program State: The fields for the SoloPool account are listed (e.g., , status), which is good. To be more granular, you could define their data types (e.g., , status: Enum { Inactive, Active, Ended }). stake_amountstake_amount: u64
- Reward Logic: The requirement A basic instruction () to calculate and release... is a good start. It could be more granular by defining how the reward is calculated. For example: Reward = (Stake Amount / Challenge Duration Days). This clarifies the core business logic for the developer.

What's Missing or Unclear?

This is the most critical area for refinement. Here are the key missing pieces of logic and clarification needed:

1. The "Stick" - Penalty Logic is Undefined:

- What's Unclear: The requirements beautifully define the "carrot" (claiming rewards) but completely omit the "stick" (what happens when a user fails). The commitment mechanism is only effective if there's a consequence for inaction.
- What's Missing: A clear requirement for handling missed sessions. Does the
 user forfeit that day's portion of the stake? Does it go to charity as the roadmap
 suggests? This logic needs to be defined, as it will significantly impact the Solana
 program's design. This could be a check_and_penalize instruction or part of
 the logic. submit_attestation

2. Time and Scheduling Logic:

- What's Unclear: How does the dApp define a "day" or a "week" for the user's plan? Is it based on UTC, the user's local timezone, or a simple 24-hour countdown from the start time?
- What's Missing: A technical requirement for timekeeping. The Solana program
 will need to use the Clock sysvar to get the current timestamp and compare it
 against the and the user's last attestation to validate their progress. The
 SoloPool account needs fields like last_attestation_timestamp.
 start_date

3. The DeFi Yield Mechanism:

- What's Unclear: How does a user opt-in? How is the yield tracked?
- What's Missing: A requirement for integrating with a DeFi protocol. For a POC, this could be simplified:
 - **Program Requirement:** The SoloPool program needs to be a Program-Derived Address (PDA) that can, in turn, interact with a lending protocol like Solend or MarginFi.
 - Frontend Requirement: A UI toggle for "Earn Yield on Stake" during the plan creation.

4. On-Chain vs. Off-Chain Data:

- What's Unclear: The "Community Feed" is a great idea, but where does its data come from?
- What's Missing: A clear decision on what data lives where. For a "Recent
 Activity" feed in a POC, you can simply query the transaction history for calls,
 which is perfectly decentralized. The requirements should state this explicitly to
 avoid the temptation of building a centralized backend. submit_attestation

By addressing these missing pieces, your requirements will be much more robust and will more fully capture the unique and compelling vision of your project.