What Is Aptos?

Aptos Network

Aptos is the Layer 1 blockchain creating a better user experience for the next digital era. We make developers more efficient, web3 more credible, and support the applications defining culture for years to come.

Aptos Labs

Aptos Labs, co-founded by Mo Shaikh and Avery Ching, is dedicated to creating better network tooling and seamless usability to bring the benefits of decentralization to the masses.

Aptos Foundation

Aptos Foundation is focused on fostering the growth of the network, cultivating a strong and evolving ecosystem, and attracting developers to improve the infrastructure of the Aptos Layer 1 blockchain continually.

What Sets Aptos Apart?

The Tech

- Aptos' breakthrough technology and programming language, Move, are designed to evolve, improve performance and strengthen web3 safeguards. With rapid & continuous improvement of the dev experience and language, Aptos upgrades almost on a monthly cadence.
- As the lowest-latency, highest-throughout blockchain in the market (launched in record time, 8 months from founding to launch), Aptos empowers developers to create the next wave of everyday applications for people around the world.

The Team

- The Aptos Labs team is composed of highly accomplished engineers and business strategists who hail from the leading consumer and tech brands in the world. The Labs team is highly skilled in rapidly developing scalable and engaging consumer experiences across various industries.
  - There is a level of innovation only possible due to the team at Aptos Labs
    - [Shoal](#) is a permanent mark on the future of consensus

- 6 of the 7 top contributors of Move by all-time commits are employed at Aptos.
- 450+ devs have contributed to Aptos and we're proud to be some of the largest contributors of Move.
- Our team has 8 of the core Move contributors, and 6 of the 7 top contributors by all-time commits are employed at Aptos.

The User Experience

- *Web3 has not gotten to mass adoption because no one was built to support a better user experience. Aptos is developer-first - giving devs the experience and foundation they need to support their brilliant ideas. This allows them to focus on the experience of the end consumer with built-in user safeguards right at the Aptos blockchain layer.*
- *From legacy web2 provider partners to tik tok competitors, partners turn to Aptos to provide the web2 user experience they have come to expect and improve upon the web3 user experience*

PROBLEM STATEMENTS

There are four possible tracks in this PS as described in the coming sections.
- **Aptos<>Metamask Snap**
- **Zero Day Futures Contracts**
- **Wordle/Qwordle On-Chain**
- **On-chain Radio**

GET STARTED WITH MOVE

1. Onboarding Resources [External]
2. If **interested** in a more immersive program, you can check this opportunity out: https://aptosfoundation.org/events/aptos-winter-school-iit-bombay

PS 1: Aptos<>Metamask Snap

This proposal describes the creation of a MetaMask Snap designed to facilitate seamless user interaction between MetaMask's array of EVM (Ethereum Virtual Machine) blockchains and the Aptos blockchain.

What is a Snap?

A Snap is a JavaScript program that runs in an isolated environment within MetaMask to extend its functionality. Snaps can access specific capabilities based on user-granted permissions.

What can a Snap do?

A Snap can:

- Modify existing functionalities
- Add new API methods to MetaMask
- Support different blockchain protocols

Aptos<>MetaMask Snap Features

#	Feature Name	Description
1	Dialogs	Custom alert, confirmation, or prompt screens in MetaMask.
2	Notifications	Direct user notifications in MetaMask or the OS.
3	Encrypted Storage	Secure user data storage and management.
4	Full Aptos Support	Allows full control over Aptos accounts and assets on Devnet/Testnet/Mainnet.
5	Transaction Insights	Pre-transaction insights display.
6	Cron Jobs	Scheduling periodic actions.
7	Custom UI	Utilize predefined components for custom UI.

References

- https://metamask.io/snaps/
- https://docs.metamask.io/snaps/
- https://github.com/MetaMask/snaps/discussions/675

PS 2: Zero Day Futures Contracts

This proposal aims to outline the development and deployment of a state-of-the-art decentralized futures trading platform. This platform is specifically designed to manage short-term futures contracts that expire in 24 hours with the option to add longer dated (n-day) futures in the future.

Key Objectives

1. To provide a non-custodial trading environment where users have full control and ownership of their assets.
2. To ensure instant settlement of all trades, profits, and losses via smart contracts upon the expiry of 24-hour contracts.
3. To offer a variety of futures contracts along with real-time market data and automated risk mitigation features.

APIs

- **Market Data API**: Provides real-time market data, including the current price, trading volume, and order book depth for all available futures contracts.
- **Transaction API**: Facilitates all financial transactions related to the buying and selling of futures contracts, as well as margin calls and settlements.

Automated Liquidation

- The platform will automatically liquidate positions that do not meet the margin requirements, minimizing the risk of default.

PS 3: Wordle/Qwordle On-Chain

Wordle

A blockchain-based version of the popular Wordle game, designed to accommodate a glossary of Blockchain/Aptos-related terminology. The game could serve as an effective way to accumulate transactions in a short period.

Key Features

- **Blockchain Terminology**: Incorporate a glossary of Blockchain/Aptos-related terms into the game.
- **Transaction Accumulation**: Players can accumulate a large number of transactions quickly, as discussed in this **Artemis thread**.
- **Mobile Compatibility**: Playable in a browser for both desktop and mobile users, with potential integration into the Petra wallet for native gameplay.

Components

- **Smart Contracts**: To manage game rules and financial transactions.

Qwordle

An enhanced, blockchain-based version of the game Qwordle, designed to generate even more transactions than regular Wordle.

Key Features

- **Enhanced Gameplay**: More complex than Wordle, providing a richer gaming experience.
- **High Transaction Volume**: Designed to bring in more transactions, aligning with the concept of **Qwordle**.

Components

- **Smart Contracts**: To manage game rules and financial transactions.

PS 4: On-chain Radio

The project aims to develop a decentralized, on-chain radio protocol that allows artists to directly connect their wallets and monetize their music.

Key Objectives

1. Create a permissionless protocol for radio broadcasting.
2. Enable wallet connectivity for artists and listeners.
3. Implement real-time revenue distribution mechanisms.
4. Build an interface for listeners to access.

#	Feature Name	Description
1	Permissionless Access	Artists can directly upload and broadcast music without intermediaries.
2	Wallet Connectivity	Artists can link their blockchain wallets for instant monetization.
3	Revenue Sharing	Real-time distribution of revenue generated from listener interactions, tips, or paid content.
4	Listener Experience	UI that allows listeners to discover, interact, and pay tips to artists.
5	Smart Contracts	Smart contracts to handle the automated distribution of funds and validate transactions.
6	Governance	Community-driven governance model for protocol updates and feature additions.
7	Curation	Select a finite amount of artists and tracks to add to the platform

SUBMISSION & EVALUATION CRITERIA

Submission Deadline: 10th December, 2023

Submission Requirements

1. **Final Presentation**
2. **GitHub Link (public/private)** with clear instructions on code execution and a comprehensive README detailing project scope, and local setup instructions. You can utilize a monorepo structure for codebase organization. Ensure the project is either hosted or can be run locally.

Recommended Skills

- JavaScript proficiency
- Blockchain development experience, particularly EVM and Aptos

Evaluation Criteria:

- Each team is expected to pick **one** of the above 4 listed possible tracks, and work on it. If a team picks more than a single track from above, the **best one** out of all the tracks chosen by the team will only be considered for evaluation.

- **Final Presentation (10%)**
  The quality of the final presentation from the teams. An outline for the same will be shared later by the company.

- **Aptos Blockchain Utilization (30%)**
  How effectively does the project leverage the unique capabilities of the Aptos blockchain? This includes considerations of the project's suitability for a blockchain-based solution, the use of specific features unique to Aptos, and the potential impact of the project on the Aptos ecosystem.

- **Technical Merit (20%)**
  How technically impressive is the project? This involves an evaluation of the technical difficulty, the sophistication of the used technologies, the elegance of the solution, and the quality of the code.

- **Project Completeness (20%)**
  How much of the project is complete? Is the solution feasible and ready to be implemented or does it still require significant development?

- **Future Potential (20%)**
  Does the project have the potential to grow, scale, or inspire further innovation?

A side note to all the participants:

- **If you're looking to build a more long-term product, Aptos Foundation will further assist in mentorship, grants, and access to the Aptos ecosystem.**
- **Basically, this challenge can act as a gateway/launchpad to building a long-term Web3 startup.**