Inferna X Dfinity PRD - NFT Marketplace

Overview:

Creating Inferna, an NFT marketplace and social network that uses the Internet Computer and its Motoko programming language. The platform (30-Day Sprint + Milestone 1) will allow users to create, sell, and purchase NFTs in a decentralized, unique, secure, and efficient manner.

Requirements:

1. **User authentication**: Users should be able to create an account, log in, and log out of the platform. Authentication should be secure and decentralized, using Internet Identity or a similar system.

2. **NFT creation:** Users should be able to create and mint their own NFTs, which will be stored on the Internet Computer as canisters. NFTs should be unique, non-fungible, and have metadata that describes their attributes, such as the creator, the name, the description, and the image.

3. **NFT listing:** Users should be able to list their NFTs for sale on the marketplace. Listings should include the price, the duration, and the terms of the sale. Users should also be able to cancel or edit their listings at any time.

4. **NFT discovery:** Users should be able to discover and search for NFTs on the marketplace. They should be able to filter and sort the listings based on various criteria, such as the price, the category, the popularity, and the date.

5. **NFT purchase:** Users should be able to purchase NFTs using the Internet Computer's native cryptocurrency, ICP, or other supported tokens. Purchases should be processed securely and efficiently, using smart contracts and canisters.

6. **Payment processing:** The marketplace should have a payment processing system that handles the transfer of funds between buyers and sellers. The system should be secure, transparent, and decentralized, using smart contracts and canisters.

7. **User reputation (optional):** The marketplace should have a user reputation system that allows buyers and sellers to rate and review each other. This will help to build trust and reduce fraud on the platform.

8. **User interface:** The marketplace should have a user-friendly interface that is easy to use and navigate. The interface should be responsive, accessible, and customizable.

9. **Security:** The marketplace should be secure and resistant to attacks and hacks. It should use best practices for security, such as multi-factor authentication, encryption, and auditing.

Deliverables:

- A fully functional NFT marketplace that runs on the Internet Computer platform and uses the Motoko programming language with canisters.
- A set of canisters that implement the marketplace's functionality, such as user authentication, NFT creation, NFT listing, NFT discovery, NFT purchase, payment processing, and user reputation.
- A user interface that allows users to interact with the canisters and the marketplace while still keeping an amazing user experience that goes beyond all other platforms.

Approximate Timeline (Checklist):

The projects grant process will be divided into the following phases, with the following timeline (this includes the 30-Day Sprint + Milestone 1):

- ☑ ~~Phase 1: Design and planning (1 week)~~
- ☑ ~~Phase 2: Education, development outline and canister testing (3 weeks)~~
- ☐ Phase 3: Development and testing of user interface (2 weeks)
- ☐ Phase 4: Integration of the marketplace functions and canister development (2-4 weeks)
- ☐ Phase 5: Bug testing and deployment (1 week)
- ☐ Phase 5: Finalization and demonstration (1 week)

Marketing Through ICP

1. **Use Dfinity's resources:** The Dfinity Foundation offers resources to support developers building on the Internet Computer platform, including community forums. We can leverage these resources to showcase our project, receive feedback, and engage with potential users and investors.

2. **Leverage ICP-based projects:** There are projects built on the Internet Computer platform that we can leverage to promote our project. We can collaborate with other projects to create partnerships or integrate ours with theirs. This will increase the visibility of our platform and build momentum

3. **Events and conferences:** Network with potential users and investors and showcase the project. We can participate in conferences such as the Internet Computer Developer Conference (ICDC) and the DFINITY Foundation Global Summit, or participate in local events to build a community around us.

4. **Engage with the community:** Building a strong community around the NFT marketplace project is crucial for its success. We should engage with potential users and investors on social media platforms and create a Discord channel dedicated to ICP. We can also create blog posts to share updates and insights, and participate in online forums to discuss our platform's vision.

5. **Offer incentives for early adopters:** Offering incentives for early adopters is a great way to attract users to the NFT marketplace project – offering discounted transaction fees for ICP users only, release our early access cards as NFTs on ICP, or offering rewards for referring new users to the platform.

6. **Partner with ICP influencers:** Collaborate with influencers to create content, host events, or promote the project on social media platforms.

Extras:

1. **SPARK Integration:** We can integrate ICPs Motoko coding language into our subsidiaries SPARK engine so that projects of ICP can audit their Motoko smart contracts using AI and fix their vulnerabilities in seconds, saving thousands of dollars and hours-days of time.2

2. **SPARK Ecosystem Protection:** We can offer NFT marketplaces built on ICP free or discounted services to use our newly built API that protects marketplaces from gore, nudity, drugs, hate speech, racism, copyrights, plagiarism and more - protection against scams and harmful content