Zenab Gauhar

Nasir Khan Kakar

CsCs367

Skills Sharing

Project Description:

The Peer-to-Peer Skill sharing dApp is a decentralized application that facilitates the exchange of skills and services directly between users using Ether. Built entirely on the Ethereum blockchain, the platform ensures trustless, transparent, and secure transactions by using smart contracts written in Solidity. Users can list, purchase, and rate services without the need for intermediaries, making it a decentralized marketplace for peer-to-peer interactions.This dApp is built entirely on the Ethereum blockchain using Solidity for smart contract development. The development environment utilized is Remix IDE, which supports contract writing, compiling, and deployment. MetaMask serves as the primary Web3 wallet for managing user accounts and transactions

Objective:

The primary objective of this dApp is to create a decentralized, secure, and trustless marketplace for the exchange or sharing of skills and services. By eliminating intermediaries, the platform empowers users to engage in direct transactions while maintaining transparency and fairness.

Functionalities:

1. Skill Listings:
   Users can list their skills or services by providing essential details such as a description, price, and optional constraints like expiration time and maximum buyers. Each skill listing is linked to the provider's wallet address and stored immutably on the blockchain, ensuring transparency and accessibility. This feature allows users to offer their skills directly to others without intermediaries.
2. Service Purchase:

Buyers can purchase skills or services by sending the specified amount of Ether directly to the provider through the platform. The smart contract validates the transaction by ensuring the skill is active, has not expired, and has not exceeded the maximum buyer limit. This functionality ensures secure and trustless transactions between buyers and providers.

3. Rating System:

   After purchasing a service, buyers can leave a rating on a scale of 1 to 5 stars. The ratings are stored immutably on the blockchain and contribute to the provider's overall reputation. This system creates trust and transparency in the decentralized marketplace.

4. Funds Withdrawal:

   Service providers can withdraw their accumulated earnings securely to their wallets. The smart contract processes the withdrawal and resets the provider's balance to zero, ensuring a secure transfer of funds.

5. Skill Deactivation:

   Skills automatically deactivate upon reaching their expiration time, preventing users from purchasing outdated or inactive services. The deactivation can also be triggered manually to maintain the marketplace's relevance and accuracy.

Additional Features:

Providers can set a maximum number of buyers for their skills, ensuring that they can manage the demand and maintain service quality. Once the limit is reached, the skill is no longer available for purchase.

Buyers can purchase multiple skills in a single transaction, streamlining the process of acquiring services.