BLACK-BOX TESTING

Black-box testing was performed on a Crypto Wallet Management System, which includes an Admin Module, Authentication Module, and User Module. The Admin Module allows administrators to configure user access, manage user information, and execute tasks such as updating user details or deleting user accounts. The Authentication Module includes a User Registration Component that allows new users to create accounts within the system and a User Login Component that enables registered users to securely log in to the system using their credentials. The User Module includes a Wallet Management Component that empowers users to manage their crypto wallets, a Transaction Tracking Component that provides users with the ability to monitor their cryptocurrency transactions, a Watchlist Management Component that permits users to create and manage watchlists for tracking specific cryptocurrencies or investments, and a Trade History Component that offers users a comprehensive view of their trade history. The testing of these modules yielded positive results, and the system has proven to be secure and user-friendly, meeting the needs of its users.

Integration Testing

The integration testing of a cryptocurrency wallet management system is essential to ensure its security, usability, and feature-rich functionality. The testing methodology encompasses security testing to ensure only authenticated users can access the system and that passwords are encrypted and stored securely, usability testing to evaluate the user interface, user-centric dashboard, and transaction execution for ease of use, functionality testing to integrate real-time trading capabilities, customizable watchlists, and transparent transaction tracking, and trade history review testing to allow users to review their trade history over time. The challenges identified for crypto wallet platforms include fragmented functionality, inadequate user experience, security-usability dilemma, limited data insights, cryptocurrency information gap, and incomplete trade history review. Potential solutions involve addressing these challenges through thorough testing to provide users with a secure, user-friendly, and feature-rich platform for managing digital assets.

Unit Testing

Unit testing is an essential step in ensuring the reliability, security, and functionality of the Crypto Wallet Management System. The testing scenarios cover various aspects, including user authentication, wallet management, transaction tracking, watchlist management, and trade history review. The testing methodology involves specialized testing tools and a focus on security and privacy to ensure the highest level of security. The challenges of testing blockchain technology include limited options for testing without real assets, difficulty controlling the timing of transactions, and constraints on manipulating or changing data to create certain outcomes. The testing process involves verifying cryptocurrency addresses, block confirmations, and performance metrics related to trade history. The testing of a crypto wallet is a vital step in its development process, and it should be carefully tested to ensure the highest level of security. The testing process includes authorization, vulnerability checks, and testing for usability and functionality.