Blockchain Internship Final Project Presentation

# 1. Introduction

This document presents the final summary of two blockchain-based projects completed during the internship at TechnoHacks. The projects showcase fundamental understanding and practical implementation of decentralized applications (DApps) and Non-Fungible Tokens (NFTs).

# 2. Project 1: VoteWise – A Simple Voting DApp

VoteWise is a decentralized voting platform that allows users to vote for candidates securely on the blockchain. This DApp utilizes Solidity for smart contract development and Web3.js for frontend integration.

Key Features:

* - Secure, immutable voting mechanism
* - Real-time vote count retrieval
* - User interaction through a simple HTML/CSS frontend

Design and Development Steps:

* - Designed and deployed smart contract using Remix IDE
* - Connected frontend using Web3.js and MetaMask for transaction authorization
* - Deployed DApp to localhost for testing and validation

# 3. Project 2: NFT Creatorz – ERC-721 NFT Minting and Showcase

NFT Creatorz allows users to mint custom Non-Fungible Tokens (NFTs) using the ERC-721 standard. These tokens are then displayed in a simple web interface with metadata like image, title, and token ID.

Key Features:

* - Mint custom NFTs using Solidity ERC-721
* - Display NFT gallery on frontend
* - Interact with deployed contracts on testnet via MetaMask

Design and Development Steps:

* - Wrote smart contract in Solidity using OpenZeppelin libraries
* - Deployed contract to testnet (e.g., Sepolia)
* - Built frontend using HTML/CSS/JS and Ethers.js for interaction

# 4. Live Demo and Tech Stack

Tech Stack Used:

* - Solidity (Smart Contracts)
* - Remix IDE (Development Environment)
* - MetaMask (Wallet Integration)
* - Ganache/Testnets (Blockchain Simulation)
* - Web3.js / Ethers.js (Blockchain Interaction)
* - HTML, CSS, JavaScript (Frontend)

# 5. Lessons Learned

* - Gained practical experience in writing and deploying smart contracts
* - Understood DApp architecture and blockchain integration
* - Learned troubleshooting common issues like ABI mismatches and MetaMask interaction errors
* - Improved debugging and frontend integration skills

# 6. Conclusion

This internship project provided valuable hands-on experience in blockchain development. By building a voting DApp and an NFT minting platform, a solid foundation in Ethereum development and decentralized systems was established.