技术类6-10

面试问答题（中英文）

技术类6-10

6、什么是去中心化应用（dApp）？

What is a decentralized application (dApp)?

答：

去中心化应用（dApp）是运行在区块链上的应用程序，具有去中心化、开源、智能合约驱动和代币激励等特征。用户通过前端与dApp交互，操作由智能合约自动执行并记录在区块链上，确保透明性和安全性。dApps应用广泛，包括去中心化金融（DeFi）、NFT、区块链游戏和社交媒体。尽管面临用户体验和扩展性等挑战，dApp代表了互联网应用的新方向。

A decentralized application (dApp) is an application running on the blockchain with features such as decentralization, open source, smart contract driven and token incentive. Users interact with dApps through a front-end, and operations are automatically executed by smart contracts and recorded on the blockchain, ensuring transparency and security. dApps are used in a wide range of applications, including Decentralized Finance (DeFi), NFT, blockchain games, and social media. Despite challenges such as user experience and scalability, dApps represent a new direction for Internet applications.

7、如何确保智能合约的安全性？

How to ensure smart contracts are secure?

答：

编写安全代码：遵循最佳实践，最小化权限，保持代码简单。

使用安全工具：利用静态分析工具（如MythX、Slither）和形式验证工具。

审计和测试：进行第三方安全审计，编写全面的单元测试，设立漏洞赏金计划。

部署和升级策略：先在测试网部署，考虑可升级性，引入时间锁机制。

监控和响应：实时监控合约运行状态，制定应急响应计划。

Write secure code: follow best practices, minimize permissions, and keep code simple.

Use security tools: utilize static analysis tools (e.g. MythX, Slither) and formal validation tools.

Audit and test: conduct third-party security audits, write comprehensive unit tests, and set up a vulnerability bounty program.

Deployment and Upgrade Strategy: Deploy on test network first, consider scalability, introduce time lock mechanism.

Monitoring and Response: Real-time monitoring of contract operation status, setting up emergency response plan.

8、你对DeFi（去中心化金融）有什么了解?

What do you know about DeFi (Decentralized Finance)?

答:

去中心化金融（DeFi）是一种基于区块链技术的金融系统，不依赖传统金融机构。它通过智能合约提供借贷、交易、稳定币和衍生品等服务。主要特点包括去中心化、开放性和可组合性。优势在于无需中介、低成本和全球可访问。风险包括技术漏洞、市场波动和监管不确定性。DeFi正在快速发展，提供创新的金融解决方案。

Decentralized Finance (DeFi) is a financial system based on blockchain technology that does not rely on traditional financial institutions. It provides services such as lending, trading, stable coins and derivatives through smart contracts. Key features include decentralization, openness and composability. Advantages include no intermediaries, low cost and global accessibility. Risks include technological vulnerabilities, market volatility and regulatory uncertainty.DeFi is rapidly evolving to provide innovative financial solutions.

9、什么是NFT？它的应用有哪些?

What is NFT and what are its applications?

答:

NFT（非同质化代币）是基于区块链的唯一数字资产，不能互换。主要应用包括数字艺术，虚拟资产，收藏品，音乐和娱乐，身份和凭证，房地产，知识产权。NFT确保了数字资产的唯一性和所有权，广泛应用于多个领域。

NFT (non-homogenized token) is a unique digital asset based on the blockchain that is not fungible. Major applications include digital art, virtual assets, collectibles, music and

entertainment, identity and credentials, real estate, and intellectual property.NFT ensures the uniqueness and ownership of digital assets, and is widely used in a variety of fields.

10、你能描述一下区块链共识机制吗?

Can you describe the blockchain consensus mechanism?

答:

区块链共识机制确保网络参与者对区块链状态达成一致。主要机制包括工作量证明（PoW），权益证明（PoS），委托权益证明（DPoS），权威证明（PoA），拜占庭容错（PBFT），这些机制在安全性、效率和能耗方面各有优缺点，适用于不同场景。

Blockchain consensus mechanisms ensure that network participants agree on the state of the blockchain. The main mechanisms include Proof of Work (PoW), Proof of Stake (PoS), Delegated Proof of Stake (DPoS), Proof of Authority (PoA), and Byzantine Fault Tolerance (PBFT), which have their own strengths and weaknesses in terms of security, efficiency, and energy consumption, and are suitable for different scenarios.