1. Bitcoin (refurbished)

The UTXO model keeps track of the outputs of previous transactions that have not been spent. Please explain (a) the alternative form of maintaining the corresponding state, and (b) a downside/challenge of the UTXO model.

2. EVM

What are the types of accounts in Ethereum and how do they differ?

3. Solidity

Two students from the HDS course, Alice and Roberto, are debating the parameter attack. Alice proposes fixing it by analyzing the code of smart contracts (with static analysis) to ensure that they always validate inputs, and Roberto proposes instead to change the encoding of function parameters to another format such as XML or JSON. Please discuss the pros and cons of each proposed solution.

4. TEEs

How does the Signal instant messaging app leverage TEEs to protect the privacy of its users?