



AALBORG UNIVERSITY
COPENHAGEN

Semester: 6th

Aalborg University Copenhagen
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Title: SmartExchange: Decentralised Trust-less
Cryptocurrency Exchange

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Abstract:

Trading cryptocurrency on a digital currency exchange is trust based and has weaknesses that could lead to funds being stolen. In this project we propose a decentralised solution based on smart contracts running on the Ethereum network that would be open, verifiable and would not require trust – instead it would be backed by the security of the platform.

The smart contract in this system would function as an escrow and would hold the user's funds until a verified transaction has been made.

We define system architecture and analyse how it could be implemented using currently available technologies. We elicit requirements on the system and the system components and then implement the system according to these requirements. Afterwards, we test the system in a model scenario, exchanging Bitcoin and Ether on test networks. We then identify possible challenges and threats to such a system.

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