

Writing Smart Contracts

Assignment 01: Introduction

Peter H. Gruber

December 5, 2022

Compulsory Exercise

Exercise 1. Write a short (≤ 2 sentences) definition of the following terms:

- (a) Hash
- (b) Address
- (c) Block
- (d) Consensus algorithm

Exercise 2. Which of the following cryptographic functions are required for what on the blockchain? Link with an arrow.

- | | | | |
|------------|-----------------------|-----------------------|---|
| Hashing | <input type="radio"/> | <input type="radio"/> | Ensure that transactions are authentic |
| Encryption | <input type="radio"/> | <input type="radio"/> | Ensure that transactions cannot be reversed |
| Signing | <input type="radio"/> | <input type="radio"/> | Ensure that transactions are secret |

Exercise 3. Watch (or finish watching) the introduction to Algorand by Silvio Micali on Youtube: <https://www.youtube.com/watch?v=NyKZ-ZSKkxM>

Exercise 4. Watch (or finish watching) the calculation of the SHA-256 algorithm by hand: <https://www.youtube.com/watch?v=y3dqhixzGVo>