Writing Smart Contracts
Assignment 07: Smart Contracts

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IMPORTANT:

- Most assignments are handed in via the blockchain.

- Read the instructions carefully and use the appropriate accounts.

- Be careful to choose the required network: Testnet or Mainnet.

- Tip: verify your transactions on Algoexplorer.

Compulsory Exercises

Exercise 1. Write a smart contract for a student club. Opt-in should only be possible if the user holds at least 1.000 units of a certain coin. (You can use one of the coins created in section 4 as a requirement). Whenever a member "visits" the club (i.e. noop), a counter should be increased. With 4 visits, the member obtains "silver" status, with 8 visits the status changes to "gold" and with 12 to "platinum". Furthermore, the first user to get platinum should have the special status "platinum first".

Exercise 2. Which of the following business models can be translated into a Smart Contract? Answer yes/no. If your answer is "no", add a 1-sentence explanation.

- A social contract that pays 100 ALGO to every address that holds less than 200 ALGOs in assets.

- A modesty contract that pays the requested sum, as long as it is below 10 ALGOS.

- A zero coupon bond that pays (back) 1000 ALGOs after 1000 rounds.

- A fairness contract that pays exactly the same amount to Alice and Bob, who are siblings.

- A pocket money contract that pays 100 ALGOs once per month.