THE
Hashgraph
ASSOCIATION

HEDERA Certification

Friday 27th Jan 2023

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Certification

Duration: 3 Hours

Start: Friday 27th January 2023, 10:00 CET (14:30 IST)

End: Friday 27th January 2023, 15:30 CET (20:00 IST)

Location: Remote

SDK Language: Any

Open book (you can use any resources you need)

Ref: I1T2C1S1M3Z1

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Task: Setup

Create a script to generate 5 Hedera Testnet accounts (Account1, Account2, Account3, Account4 and Account5).

Use these accounts as indicated in the following tasks.
These accounts must not already exist before the start of the test.

Be sure to note down the account Id and keys of the accounts – you will need these later. You will also need to communicate these account IDs during your response to the certification test.

Fund the accounts as you see appropriate to cover the costs of your tasks.

Provide the script output(s) in your response.

Create a script that creates a fungible token with the Hedera Token Service belonging to Account1.

The initial supply should be 350.50 and additional supply can be created by Account2. The maximum supply should be 500.

Create a script to send 25.25 tokens to each of Accounts3 and Account4.

Pause the token. Then make another transfer of 1.35 to **Account3**. The transaction fails. Unpause the token and complete the transfer.

Provide the script output(s) in your response.

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Task: Smart Contract Service

Download and deploy the solidity bytecode given below using the Hedera Smart Contract Service and Account1. Call function “function1” with parameters “6” and “7” and print the answer you receive. Hint: there are 2 input parameters, and you will receive a return value. Further information is in the ABI file. All parameters are of type “uint16”.

Create a second transaction using function “function2” and supply the result of “function1” as the input. Print the final value into your response.

Extra credit: Decode and print the return value from the transactions using ABI decoding.

Provide the script output(s) in your response.

Bytecode/ABI JSON URL	https://drive.proton.me/urls/M0JHN4MRDM#JIvywUklTK7G

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Task: Scheduled Transaction

Create a script that creates a scheduled transaction to transfer 10 Hbar from **Account1** to **Account2**.

Serialise and export the transaction to a base 64 format and use this as the input to the next step.

Make a second script (or function) that reads in the serialised format and provides the required signature and submit it.

Provide the script output(s) in your response.

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Task: Multi Signature

Use **Account1** as a treasury account so that **Account2** can spend 20 Hbar on behalf of Account1.

Create a transaction that transfers the 20 Hbar to **Account3**.

Re-run the same operation and show that the allowance has been used and that the second transaction fails.

Provide the script output(s) in your response.

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Task: Consensus Service

Create a script to create a consensus transaction on the Hedera Consensus Service using **Account1**. Write the current time in the message of the transaction and submit.

Provide the script output(s) in your response.

Thanks!

Now please provide your code and script results in an archive or public Git repository, replying to the email you received the task in.