

**Week 1**

# Laboratory 01

Stellar Technical Academy



# Self-Assessment Exercises

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## Objectives

- The first exercise aims to familiarize students with the Stellar Laboratory, by creating your very own Stellar account and issuing a transaction.
- Remember to safely store your keypair (public key and secret key). You will need both the private and the public key throughout the exercises.
- In this exercise you will:
  - Create an account
  - Fund your account with some Lumens
  - Perform a transaction
- If the transaction is correct...you have finished the first exercise! If you followed the process correctly, then you will receive your first NFT certificate for Week 1.
  - To check if you have the NFT enter your account into the StellarExpert searcher.

# Self-Assessment Exercises

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## Introduction

- The exercises aim to help the student acquire practical knowledge of the Stellar Network.
- All the exercises are developed on the testnet, so they do not require real funds.
- The exercises are designed to be done and evaluated autonomously.
- At the end of each exercise, the student will be airdropped with an NFT, verifying the successful completion of the exercises.
- For final verification of completing all exercises correctly, we advise you to use the same Stellar account in all exercises, since each week's exercise is based on the previous week's exercise being completed correctly.

# Self-Assessment Exercises

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## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- In the first exercise, familiarize yourself with the Stellar Laboratory tools presented in the previous slides, specifically the Stellar Laboratory and the Stellar Expert tools.
- More specifically, as was described in the Week 1 Theory part, you will:
  - Create your own account
  - Create a transaction
  - Sign the transaction with your secret key and
  - Submit the transaction to the network
- Then, you will check on the Stellar Expert to verify that the transaction was successfully made.

# Self-Assessment Exercises

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## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory


1. You are going to create your **testnet** account using the [Stellar Laboratory](#), by generating your unique keypair.
2. Then, just below, you are going to fund your account with some lumens in order to activate it. In order to do so, you need to enter your public key into the field. If done correctly, you should have 10.000 lumens in your testnet account. You can verify that your account was successfully funded by using the [Stellar Expert](#), a ledger analytics platform. To verify it, you can just search for your account in the search bar, using your public key. Keep in mind that the Stellar Expert should run on the testnet network.
3. For the exercise, we have already made a testnet account, which will be the deposit account. This means that you only have to create one account, the source account. Using your source account, you are going to make a transaction between the UNIC testnet account and your new account and you are going to send 10 lumens.

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- You start off by going to <http://laboratory.stellar.org> and creating your Stellar test account. To do so, you choose the 'Create Account' tab in the landing page of the laboratory and then choose 'Generate keypair', as the first step to create your account.
- Make sure that you check the right top corner of the page and verify that the laboratory runs on the test network.

The next testnet reset has not yet been scheduled.

 Stellar | Laboratory

[test](#) [public](#) [custom](#)  
<https://horizon-testnet.stellar.org>

[Introduction](#) [Create Account](#) [Explore Endpoints](#) [Build Transaction](#) [Sign Transaction](#) [Submit Transaction](#) [View XDR](#)

### Keypair generator

These keypairs can be used on the Stellar network where one is required. For example, it can be used as an account master key, account signer, and/or as a stellar-core node key.

[Generate keypair](#)

### Friendbot: Fund a test network account

The friendbot is a horizon API endpoint that will fund an account with 10,000 lumens on the test network.

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- As mentioned before, the Keypair generator will give you a Public Key and a Secret Key. You should make sure that you save both. The Public Key will be your address, and the Secret Key will be the 'password' to sign transactions or access your funds.

### Keypair generator

These keypairs can be used on the Stellar network where one is required. For example, it can be used as an account master key, account signer, and/or as a stellar-core node key.

Generate keypair

Public Key	GALH3KOLMCHX3TGH7XYBBXCSC7HJIHJ4K
Secret Key	SB7FGUDZ2RC3LM4746PLFIKMMWR72YSXNY

[Fund this account on the test network using the friendbot tool below](#)

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- In order for an account to activate on the Stellar network, it requires that its balance has a minimum amount of Lumens on it. To receive these lumens in the test network, Stellar provides us with the Friendbot, which you can find just below of the Keypair generator.
- You can simply claim your free fund by introducing your Public Key in the Friendbot.

### Keypair generator

These keypairs can be used on the Stellar network where one is required. For example, it can be used as an account master key, account signer, and/or as a stellar-core node key.

Generate keypair

Public Key GALH3KOLMCHX3TGH7XYBBXCSC7HJIH

Secret Key SB7FGUDZ2RC3LM4746PLFIKMMWR72Y:

[Fund this account on the test network using the friendbot tool below](#)

### Friendbot: Fund a test network account

The friendbot is a horizon API endpoint that will fund an account with 10,000 lumens on the test network.

GALH3KOLMCHX3TGH7XYBBXCSC7HJIHJ4K

Get test network lumens



# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- Congrats! If you have followed these steps so far, 10,000 lumens have been send to your account! To check it, you can use the [Stellar Expert](#). Make sure that you use the test network.



- In the Stellar Expert search bar, you can introduce your Public Key and search for you account.



# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- You will immediately see that your account's balance is 10,000 XLM, along with the summary and the operations of your account.

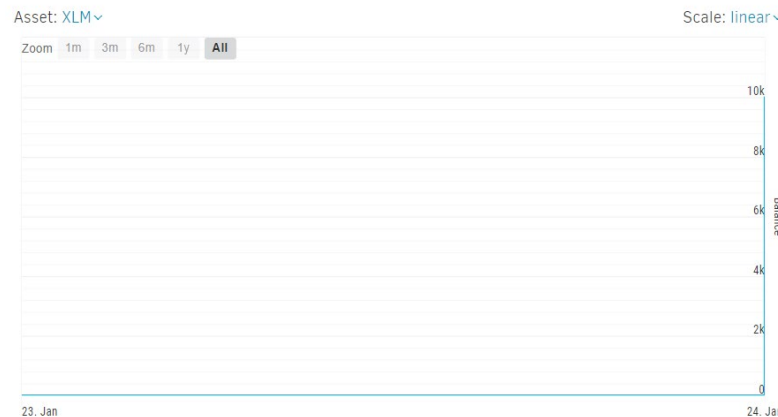
### Summary

Total payments: 1  
Total trades: 0  
Created: 2022-01-24 08:46:30 UTC  
Created by: GAIH...ZNSR  
Last year activity: zero  
Last month activity: zero  
Account lock status: unlocked  
Operation thresholds: 0 / 0 / 0  
Asset authorization flags: none  
Account Signers  
GALH...R3M4 (w:1)

### Account Balance



### Balance History



All Operations Payments Offers Trades Settings Active Offers

Operation: 2822716931444737

Details: GAIH...ZNSR created account GALH...R3M4 with starting balance 10,000 XLM

Date: 2022-01-24 08:46:30 UTC

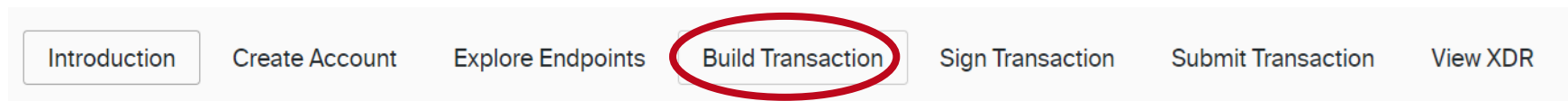
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Export Data

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- Now, you are ready start making your first transaction in Stellar!
  - First, in the Stellar Laboratory bar, you should click on the “Build Transaction” option.



- An empty transaction form is going to be presented to you.

[Clear form contents and start over](#)

Transaction Type <sup>?</sup> **Transaction** Fee Bump

Source Account <sup>?</sup>   
If you don't have an account yet, you can create and fund a test net account with the [account creator](#).

Transaction Sequence Number <sup>?</sup>   
The transaction sequence number is usually one higher than current account sequence number.

Base Fee <sup>?</sup>   
The [network base fee](#) is currently set to 100 stroops (0.00001 lumens). Based on current network activity, we suggest setting it to 100 stroops. Final transaction fee is equal to base fee times number of operations in this transaction.

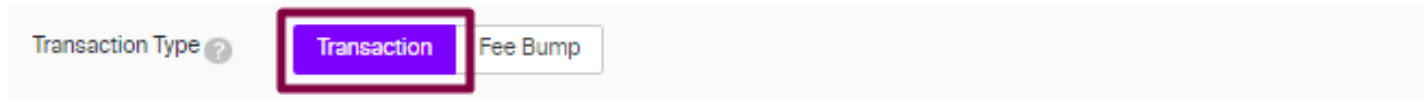
Memo <sup>?</sup> (optional) **None** Text ID Hash Return

Time Bounds <sup>?</sup> (optional)  
  
  
Enter [unix timestamp](#) values of time bounds when this transaction will be valid.  
For regular transactions, it is highly recommended to set `max_time` to get a [final result](#) of a transaction in a defined time.  
**Set to 5 minutes from now**

# Self-Assessment Exercises

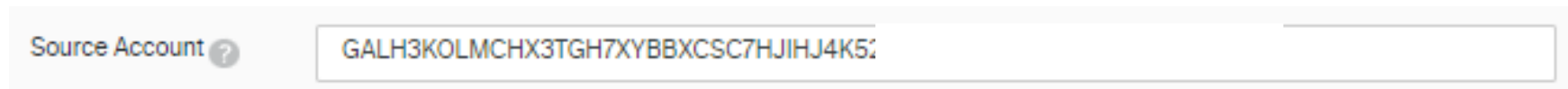
## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- Next, you are going to fill the gaps of the transaction parameters, as analysed on the theoretical part.
  - As a transaction type, you are going to choose “Transaction”.



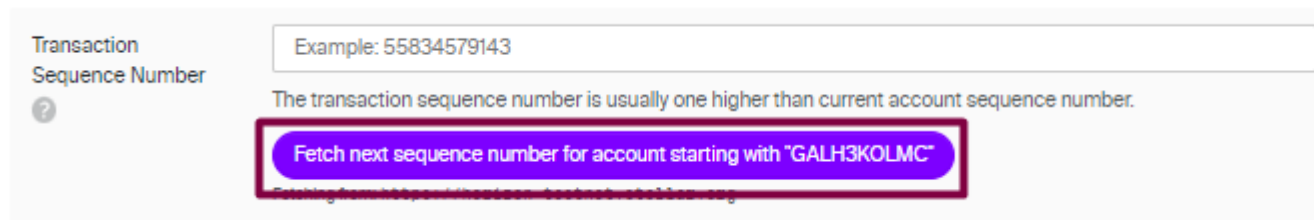
Transaction Type ? **Transaction** Fee Bump

- In the Source Account field, you are going to insert your public key.



Source Account ? GALH3KOLMCHX3TGH7XYBBXCSC7HJIHJ4K5:

- In the Transaction Sequence Number you are going to click on “Fetch next sequence number for account starting with [Public Key]”. The transaction sequence will automatically be generated, a number of 16 digits.



Transaction Sequence Number ? Example: 55834579143

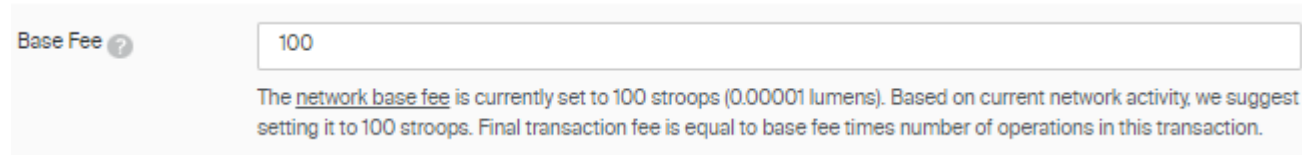
The transaction sequence number is usually one higher than current account sequence number.

**Fetch next sequence number for account starting with "GALH3KOLMC"**

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- You are going to leave the base field as it is.

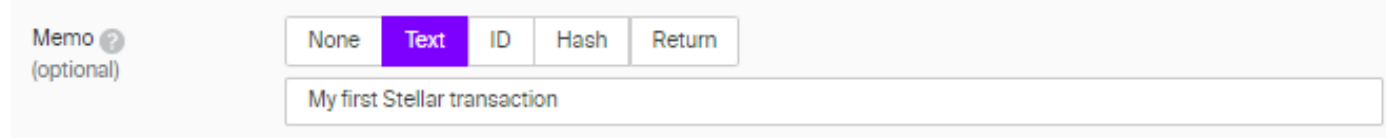


Base Fee ?

100

The network base fee is currently set to 100 stroops (0.00001 lumens). Based on current network activity, we suggest setting it to 100 stroops. Final transaction fee is equal to base fee times number of operations in this transaction.

- As we mentioned in the Week 1 Theory part, the memo is an optional field. Since you are going to perform a basic transaction, you are not going to leave it empty.

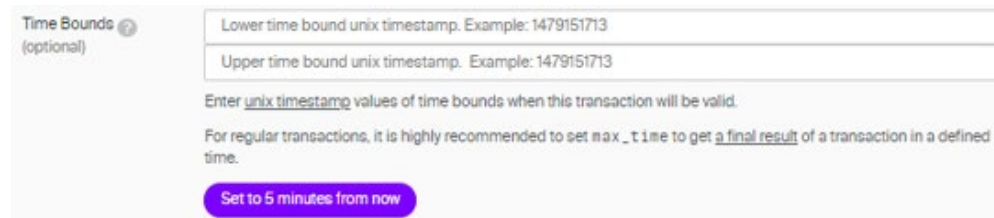


Memo ?  
(optional)

None Text ID Hash Return

My first Stellar transaction

- Same goes for the Time Bound field.



Time Bounds ?  
(optional)

Lower time bound unix timestamp. Example: 1479151713

Upper time bound unix timestamp. Example: 1479151713

Enter unix timestamp values of time bounds when this transaction will be valid.

For regular transactions, it is highly recommended to set max\_time to get a final result of a transaction in a defined time.

Set to 5 minutes from now

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- Then, you are going to move on to the Operation Type form. Out of a wide variety of operation types, you are going to select the “Payment” operation type, that sends an amount of a specific asset to a destination account.

The screenshot shows the Stellar Laboratory interface. On the left, there is a box with the number '1' and a 'duplicate' button. The main area is titled 'Operation Type' with a help icon. A dropdown menu is open, displaying a list of operation types. The 'Payment' option is highlighted. Below the dropdown, there is a section for 'form validation errors' which shows a message: '- Sequence number is a required'.

1

duplicate

Operation Type ?

Select operation type

Select operation type

- Create Account
- Payment
- Path Payment Strict Send
- Path Payment Strict Receive
- Manage Sell Offer
- Manage Buy Offer
- Create Passive Sell Offer
- Set Options
- Change Trust
- Allow Trust
- Account Merge
- Manage Data
- Bump Sequence
- Create Claimable Balance
- Claim Claimable Balance
- Begin Sponsoring Future Reserves
- End Sponsoring Future Reserves
- Revoke Sponsorship
- Clawback

form validation errors:

- Sequence number is a required

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- In the Destination field, you are going to insert the account address (public key) that will receive the payment. The public key you are going to insert is:  
GDBOTYDUAXYHO2QLXZCPJUYS3JRDHJL7P7WYQUKMLPBXITUQO5GYZWLN

Destination

- Then, in the Asset field, you are going to select the “native” option, since you are going to send Lumens, the native token of the network.

Asset native Alphanumeric 4 Alphanumeric 12

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- In the Source Account field, you are going to insert your Public Key again.

Source Account  
(optional)

GALH3KOLMCHX3TGH7XYBBXCSC7HJIHJ4

- Once all the parameters are filled, you will see a box, which contains the transaction envelope XDR. You are going to click on the 'Sign in Transaction Signer' and you will be redirected at the 'Sign Transaction' window.

**Success! Transaction Envelope XDR:**

Network Passphrase:  
Test SDF Network ; September 2015  
Hash:  
d15b33887de182050aa0830061d08c4d7fc5de4016d6a99ad86f354dd2d7e01c  
XDR:  
AAAAAgAAAAWfanLYI99zMf98BDcUhf01B08V3XLeH1tVaQyVoumeAAAAAG0ACgc / AAAAAQAAAAEAAAAAAAAAAAAAAAAAAAAQA  
AABxNeSBmaXJzdCBTdGVsbGFyIHRyYW5zYWNoaW9uAAAAAQAAAAEAAAAAFn2py2CPfczH / fAQ3FIxPQdPFd1y3h9bVWqs1aLpngAAA  
ABAAAAAMLp4HQF8HdqC75E9NMS2mIzpX9 / 7YhRTFvDdE6Qd02MAAAAAAAAAAF9eEAAAAAAAAAAAA=

In order for the transaction to make it into the ledger, a transaction must be successfully signed and submitted to the network. The laboratory provides the [Transaction Signer](#) for signing a transaction, and the [Post Transaction endpoint](#) for submitting one to the network.

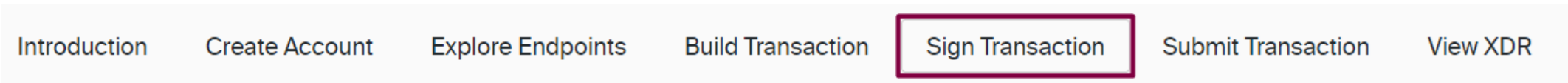
[Sign in Transaction Signer](#) [View in XDR Viewer](#)



# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- In the 'Sign Transaction' window, you are going to sign the transaction, in order to authorize it.



- First, you will see the Transaction overview, where you can check that parameters entered before are correct.

Transaction overview [Clear and import new transaction](#)

Signing for	Test SDF Network ; September 2015
Transaction Envelope XDR	AAAAAgAAAAWfanLYI99zMf98BDcUhf01B08V3XLeH1tVaQyVoumeAAAAGQACgc / AAAAQAAA AEAAAAAAAAAAAAAAAAAAAAAAAAAAAAABxNeSBmaXJzdCBTdGVsbGFyIHRyYW5zYWN0aW9uAA AAQAAAAEAAAAFn2py2CPfczH / fAQ3FIXzpQdPFd1y3h9bVWqslalpngAAAAABAAAAAMLp4HQ F8HdqC75E9NMS2mIzpX9 / 7YhRTFvDdE6Qd02MAAAAAAAAAAF9eEAAAAAAAAAAAAA=
Transaction Hash	d15b33887de182050aa0830061d08c4d7fc5de4016d6a99ad86f354dd2d7e01c
Source account	GALH3KOLMCHX3TGH7XYBBXCSC7
Sequence number	2822716931440641
Transaction Fee (stroops)	100
Number of operations	1
Number of existing signatures	0

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- Then, in the Signatures form, you are going to insert your secret key, in order to sign the transaction. Once you introduce the secret key, you can click on 'Submit in Transaction Submitter'.

Signatures ?

Add Signer

Secret key (starting with S) or hash preimage (in hex)

BIP Path

44'/148'/0'

Sign with Ledger

Sign with Trezor

NOTE: Trezor devices require upper time bounds to be set (non-zero), otherwise the signature will not be verified.

Albedo

Sign with Albedo

Enter a secret key to sign message

→

Signatures ?

Add Signer

SB7FGUDZ2RC3LM4746PLFIKMMWR

Secret key (starting with S) or hash preimage (in hex)

BIP Path

44'/148'/0'

Sign with Ledger

Sign with Trezor

NOTE: Trezor devices require upper time bounds to be set (non-zero), otherwise the signature will not be verified.

Albedo

Sign with Albedo

Transaction signed!

1 signature(s) added; 1 signature(s) total

AAAAAgAAAAWfanLYI99zMf98BDcUhf01B08V3XLeH1tVaQyVoumeAAAAAQACgc / AAAAAQAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAQA  
AABxNeSBmaXJzdCBTdGVsbGFyIHRyYW5zYWN0aW9uAAAAQAAAAEAAAAAFn2py2CPfczH / fAQ3FIxZpQdPFd1y3h9bVWqs1aLpngAAA  
ABAAAAAMLp4HQF8HdqC75E9NMS2mIzpX9 / 7YhRTFvDdE6Qd02MAAAAAAAAAAAAF9eEAAAAAAAAAAAFwi6Z4AAAAQJC81Dq35cZwAfd05  
mAz9XJPeRk4H1njAqp+yLtuXkQ16Z2poTk0XOMwZxz5b0emb / KJy94uKHAcFIcIJoq0FAw=

Now that this transaction is signed, you can submit it to the network. Horizon provides an endpoint called Post Transaction that will relay your transaction to the network and inform you of the result.

Submit in Transaction Submitter

View in XDR Viewer

Wrap with Fee Bump

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- You will be redirected to the ‘Submit Transaction’ window, where you can check the source code of your transaction.

[Introduction](#) [Create Account](#) [Explore Endpoints](#) [Build Transaction](#) [Sign Transaction](#) [Submit Transaction](#) [View XDR](#)

Input a base-64 encoded TransactionEnvelope:

```
AAAAAgAAAAWfanLY199zMf98BDcUHfOIB08V3XLeHtVaqyVoumeAAA  
AGQACgc/AAAAQAAAAEAAAAAAAAAAAAAAAAAAAAAAQAAABx  
NeSBmaXJzdCBTdGVsbGFyHRyYW5zYWNoaW9uAAAAAAAAAAAAEAAA  
AFn2py2CPfczH/IAQ3FIxZpOdPfdly3h9bVWqslLpngAAAAABAAAAAMLp  
4HOF8HdqC7SE9NMS2mlzpX9/7YhRTFvDdE6Qd02MAAAAAAAAAAAAF9  
eEAAAAAAAAAAFWi6Z4AAAAQJC81Dq35crwAfdO5mAz9XJPeRk4Hlnj  
Acp-yLtuXkQ16Z2poTkOXOMvZxz5bOemb/KJy94uKHsCflclJoqQFAw=
```

[Submit Transaction](#)

TransactionEnvelope: [envelopeTypeTx]

```
v1  
tx  
  sourceAccount: [keyTypeEd25519]  
    ed25519: GALH3KOLMCHX3TGH7XYBBXCSC7H3IH34K524W6D5NVK2VMSWROTHR3M4  
  fee: 100  
  seqNum: 2822716931440641  
  timeBounds  
    minTime: 0  
    maxTime: 0  
  memo: [memoText]  
    text: My first Stellar transaction [hex: TXkgZmlyc3QgU3R1bGxhcjB0cmFuc2FjdGlvbg==]  
  operations: Array[1]  
    [0]  
      sourceAccount: [keyTypeEd25519]  
        ed25519: GALH3KOLMCHX3TGH7XYBBXCSC7H3IH34K524W6D5NVK2VMSWROTHR3M4  
      body: [payment]  
        paymentOp  
          destination: [keyTypeEd25519]  
            ed25519: GDBOTYDUAXYH02QLXZCP3UYS3JRDH3L7P7WYQUMKLP8XIITU005GYZWLN  
          asset: [assetTypeNative]  
            amount: 10.0 (raw: 100000000)  
        ext: [undefined]  
      signatures: Array[1] Signatures checked!  
        [0]  
          hint: G_____WROTH_____  
          signature: kLzUOrflyAB907mYDP1ck95GTgeWeMCqn7Uu25eRDxpnamhOTRc4zBnHPis56Zv8onL3i4odoJ8hwgmirQUADA==
```

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- The last step is to submit the transaction by clicking on the ‘Submit Transaction’ button.

Input a base-64 encoded TransactionEnvelope:

```
AAAAAgAAAAWfanLYI99zMf98BDcUhfOIB08V3XLeH1tVaQyVoumeAAA  
AGQACgc/AAAAAQAAAAEAAAAAAAAAAAAAAAAAAAAAAQAAABx  
NeSBmaXJzdCBTdGVsbGFyIHRYYW5zYWNOaW9uAAAAAQAAAAEAAAA  
AFn2py2CPfczH/fAQ3FIXzpQdPFd1y3h9bVWqslA.pngAAAAABAAAAAMLp  
4HQF8HdqC75E9NMS2mlzpX9/7YhRTFvDdE6Qd02MAAAAAAAAAAAAF9  
eEAAAAAAAAAAAFWi6Z4AAAAQJC81Dq35crwAfdO5mAz9XJPeRk4Hlnj  
Aqp+yLtuXkQ16Z2poTk0XOMwZxz5bOemb/KJy94uKHaCflclJoq0FAw=
```

Submit Transaction

- In just a few seconds, you will be notified that your transaction has been successfully submitted!

**Transaction submitted!**  
Transaction succeeded with 1 operation(s).

```
Hash :  
d15b33887de182050aa0830061d08c4d7fc5de4016d6a99ad86f354dd2d7e01c  
Ledger number :  
658149  
Paging token :  
2826728430903296  
Result XDR :  
AAAAAAAAAGQAAAAAAAAAAQAAAAAAAAABAAAAAAAAAA=  
Result Meta XDR :  
AAAAAgAAAAIAAADAAoK5QAAAAAAAAAFn2py2CPfczH/fAQ3FIXzpQdPFd1y3h9bVWqslA.pngAAAAXSHbnnAAKBz8AAAAAAAAAAAAA  
Fee Meta XDR :  
AAAAAgAAAAACgc/AAAAAAAWfanLYI99zMf98BDcUhfOIB08V3XLeH1tVaQyVoumeAAAAABdIdugAAoHPwAAAAAAAAAAAAAAAAAA
```

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- You can make sure that the amount has been transferred to the destination account using, again, the Stellar Expert explorer.
- If you explore with your public key, you will see that the total payments done by your account now are two; the funding with the Friendbot, and the transaction you just performed.
- Your balance has decreased by 10 lumens. Now your total balance is  $10,000 - 10 = 9,990$  lumens... However, considering the transaction fee which is 0,00001 lumens, the final balance is 9,989.99999 lumens!

### Summary

Total payments: 2  
Total trades: 0  
Created: 2022-01-24 08:46:30 UTC  
Created by: GAIH...ZNSR  
Last year activity: low  
Last month activity: low  
Account lock status: unlocked  
Operation thresholds: 0 / 0 / 0  
Asset authorization flags: none  
Account Signers  
 GAIH...R3M4 (w:1)

### Account Balance

9,989.99999  
9,988.99999 available

All Operations Payments Offers Trades Settings Active Offers

Operation	Details	Date
2826728430903297	GALH...R3M4 transferred 10  XLM to  GDBO...ZWLN Memo (TEXT): My first Stellar transaction	2022-01-24 10:08:10 UTC
2822716931444737	GAIH...ZNSR created account  GALH...R3M4 with starting balance 10,000  XLM	2022-01-24 08:46:30 UTC

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Export Data

# Self-Assessment Exercises

## Exercise 1 – Creating an account and making a transaction in the Stellar Laboratory

- In order to secure your NFT badge for successfully completing the Week 1 Laboratory, copy and paste the transaction ID into Moodle.
- The transaction ID is the hash number you can find after the transaction is submitted.

```
Transaction submitted!
Transaction succeeded with 1 operation(s).

Hash:
d15b33887de182050aa0830061d08c4d7fc5de4016d6a99ad86f354dd2d7e01c
Ledger number:
658149
Paging token:
2826728430903296
Result XDR:
AAAAAAAAAGQAAAAAAAAAAQAAAAAAAAABAAAAAAAAAA=
Result Meta XDR:
AAAAAgAAAAIAAADAAoK5QAAAAAAAAAAFn2py2CPfczH/fAQ3FIXzpQdPFd1y3h9bVWqslalpngAAAAXSHbnnAAKBz8AAAAAAAAAAAAA
Fee Meta XDR:
AAAAAgAAAAMACgc/AAAAAAAAAAWfanLYI99zMf98BDcUhf01B08V3XLeH1tVaQyVoumeAAAABdIdugAAAoHPwAAAAAAAAAAAAAAAAAA
```

# Self-Assessment Exercises

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## Exercise 2 – Albedo Web Wallet

- Stellar can support a variety of web wallets. In this exercise, you are going to use the [Albedo Web Wallet](#), which can also operate on the test network.
- The Albedo Web Wallet is one of the many *third-party key management applications* that Stellar supports and allows other Stellar apps to request transaction signing or identity verification without ever exposing your secret.
- You can find more about the third-party key management applications for Stellar [here](#).

Albedo

Single access point to Stellar universe

Albedo allows other Stellar apps to request transaction signing  
or identity verification without ever exposing your secret key

[Manage your account](#)


Highlights  
for  
[Users](#) / [Developers](#)




# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- On the landing page of Albedo, you can see the option ‘Create Albedo Account’. Once you click on this button, you are going to see that Albedo provides you with three options:
  1. Create your own account
  2. Log in with an existing account, and
  3. Import an account already created
- Since we have already created our Stellar test account, we are going to proceed with ‘Import account’.

Set Account Password 

We don't have access to your password or secret keys. Everything is encrypted and stored in the browser.

 Ledger




# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- Although we talk about not sharing our secret key all the time, this time when Albedo asks for your secret key, it is necessary that you insert it to the corresponding field, just like you insert your password when you want to log in to your email account.
- After giving your secret key for the first time, the Albedo wallet will ask you to set an account password, in order to log in with it from now on.

### Import Account



Use this tool to import keys from any Stellar wallet or transfer your Albedo account to another browser/device.

**⚠** Before starting the import process, do not forget to double-check the URL(the domain should be **albedo.link**) and SSL validity(a small lock icon on the left of the address bar).

Copy-paste your key below. Supported formats:


- 24-word Albedo account passphrase backup
- Stellar account secret key (starts with "S...")

**SB7FGUDZ2RC3LM4746PLFIKMMWR72YSXNYCSMVQE22M**

Next

Cancel

### Set Account Password



.....

.....

Import account

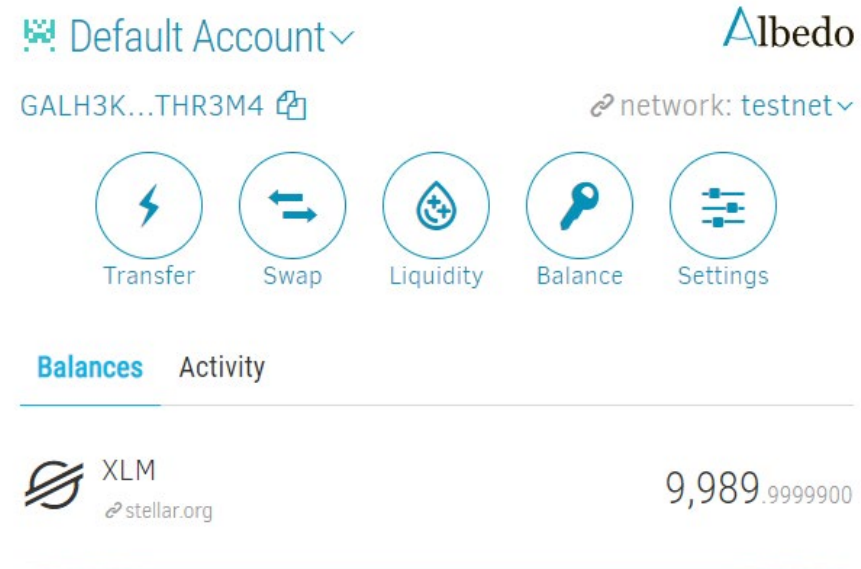
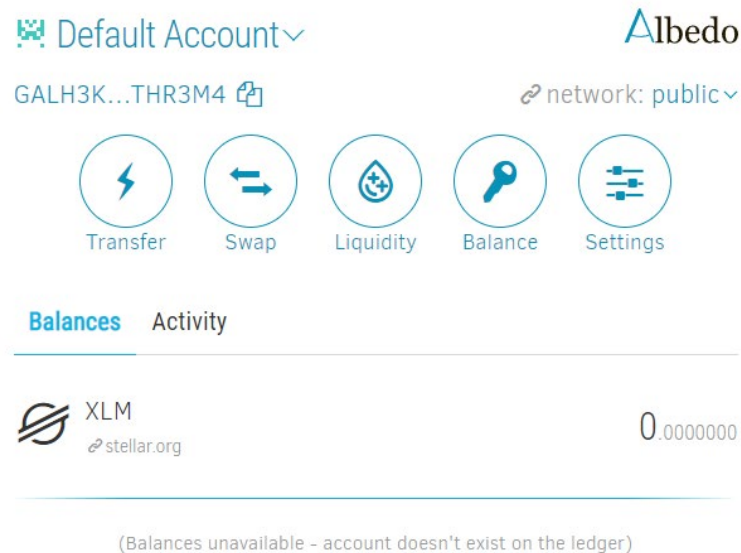
Cancel

We don't have access to your password or secret keys. Everything is encrypted and stored in the browser.

# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

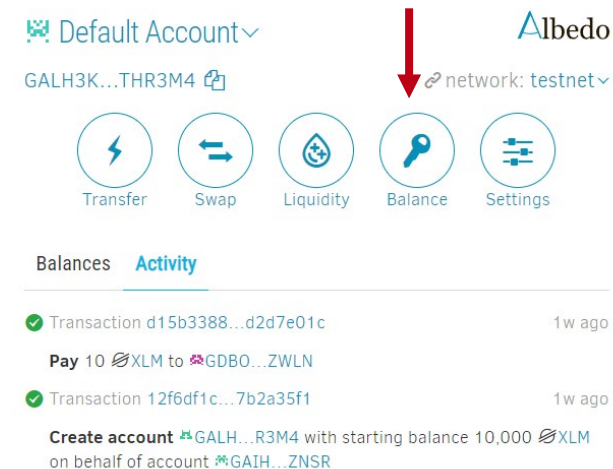
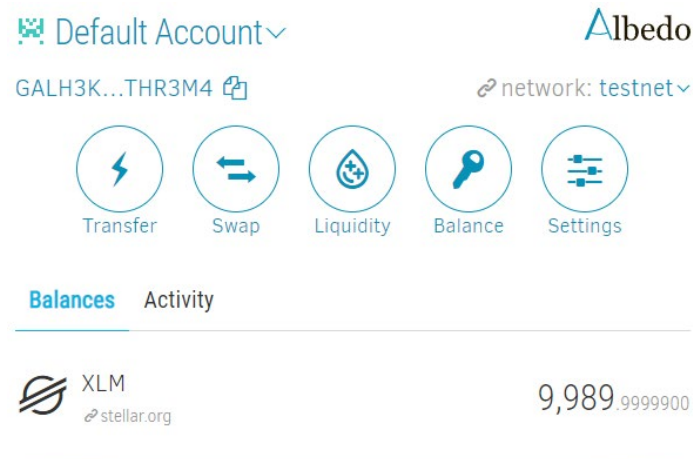
- Once you are successfully logged in, you will notice that the account appears as a 'Default Account' with a zero balance. That happens because, once logged in, the account shows up in the public network.
- However, once you head to the right upper corner of the page and change the network to 'testnet', you will see that the right balance appears.



# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- Once logged in, as you can see in the main page, the Albedo Web Wallet allows us to transfer tokens, swap between two tokens, manage the liquidity pools (we will dive into them in the following sessions) and also check the balance and history of the account.
- For example, if you go to Balance, then Activity (or History), you are able to see all the transactions of your account.



# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- Now, you are going to click on the 'Settings' button. The first time you click on the 'Settings' button, Albedo is going to ask you for your password. Once you type it, you will be directed to the 'Account Settings'.
- There, you can see your public key and modify your account's name, as it appears on the Albedo wallet. Additionally, you can export or check your secret key. You should never reveal your password to anyone - whoever gets access to your password, also gets access to your secret key!

Authorization for Default Account

Please provide your password

ConfirmCancel

### Account settings



Public key: [GALH...R3M4](#)

Identifies the account on the ledger. Think of it as an address which holds your balances and where other users can send funds.

Friendly name

Default Account

Setting friendly name makes it easier to identify an account when you are using more than one.

### Export secret key

The secret key is used internally to sign Stellar transactions and authenticate account identity on third-party services. Corresponding 24-word recovery passphrase is the backup of your secret key.

⚠ Do not share your secret key or passphrase. Do not trust any person or website asking it. Avoid storing it in unsafe places, your phone, or computer in the plaintext. Anyone with this key will have access to funds stored on your account.

Account passphrase

(click here to reveal passphrase)

Secret key

(click here to reveal secret key)

Export account

# Self-Assessment Exercises

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## Exercise 2 – Albedo Web Wallet

- In 'Account Settings', you can remove/delete your account, by clicking to the 'Remove account' button, or click and go 'Back' to the main page.

### Forget account

If you want to remove account Default Account (GALH...R3M4) from Albedo, please make sure that you have the backup of your recovery phrase or secret key somewhere because you will no longer have access to this account from Albedo on your current device once you delete it.

 Remove account

Please note, removing the account from Albedo will not affect your Stellar account on the ledger. You can use [StellarExpert Demolisher tool](#) to delete Stellar account completely and reclaim all reserved funds.

Back

# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- Now, you are going to change the 'Friendly name' to: 'Stellar Academy'.
- Then, you can go back in the main page and see that the name of your account has successfully changed.

### Account settings

Albedo

Public key:  GALH...R3M4 

Identifies the account on the ledger. Think of it as an address which holds your balances and where other users can send funds.

### Friendly name

Setting friendly name makes it easier to identify an account when you are using more than one.

 Stellar Academy 

Albedo

GALH3K...THR3M4 

 network: testnet 



Transfer



Swap



Liquidity



Balance



Settings

Balances Activity



XLM

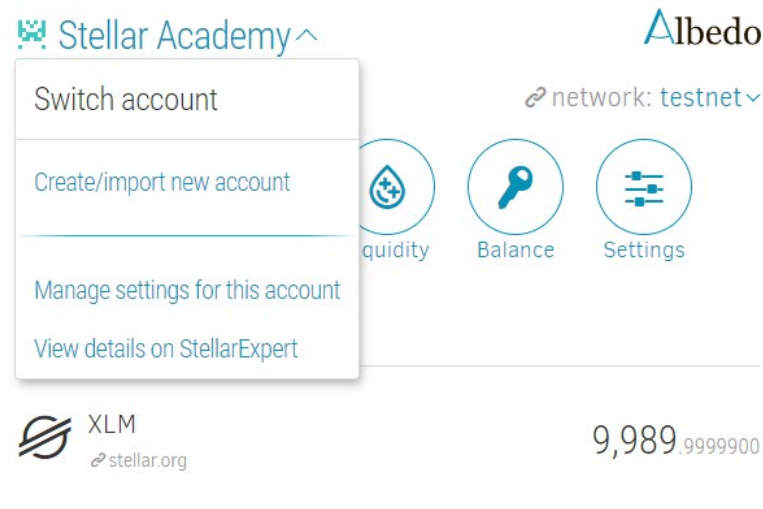
 stellar.org

9,989.9999900

# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

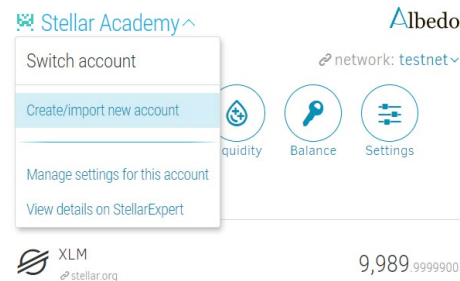
- If you click on the drop down button next to the name of your account (Stellar Academy), you can see some other options like:
  - Switch account
  - Create/import new account
  - Manage settings for this account (Same as the 'Settings' option)
  - View details on StellarExpert (move to your account on the StellarExpert explorer)



# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- You are going to create a new account by clicking on 'Create/import new account'.
- Next, you are going to see an informative message and once clicking 'Proceed', you will be redirected to a page where you can create your account, log in to an existing account, or import one, just like at the very start.
- In this case, you are going to create an account by inserting a password (different from the previous one) and click on the 'Create account' button.



### Welcome to Albedo



Albedo provides a safe and reliable way to use Stellar accounts without trusting anyone with your secret key. We don't have access to any sensitive data, everything is encrypted and stored in the browser.

It works like a bridge for other applications that allows them to ask your permission to sign transactions or verify identity on your behalf, so you can use the same account across the whole universe of Stellar applications. Albedo is open-source and free to use for everyone.

Your information and funds are protected, but please remember:

- You and only you control your account
- Albedo is not a wallet, bank, or exchange
- We don't control your keys or you funds
- We can't undo your transaction or recover keys/passwords

Proceed >

### Set Account Password



Two password input fields, each with a masked password (\*\*\*\*\*). Below the fields are two buttons: 'Create account' (blue) and 'Cancel' (white with blue border).

We don't have access to your password or secret keys. Everything is encrypted and stored in the browser.

A link 'already have account?' followed by two buttons: 'Log in' (white with blue border) and 'Import account' (white with blue border).

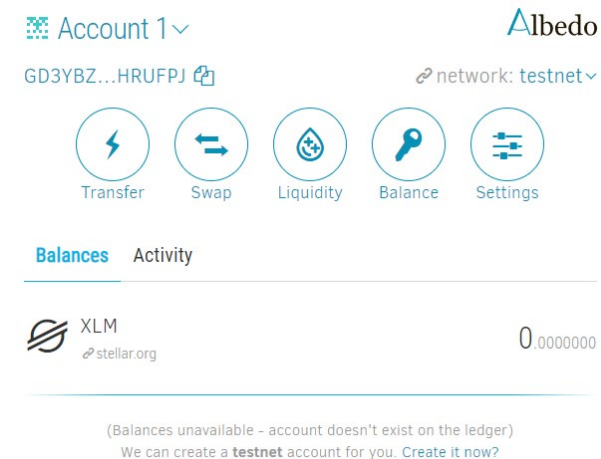
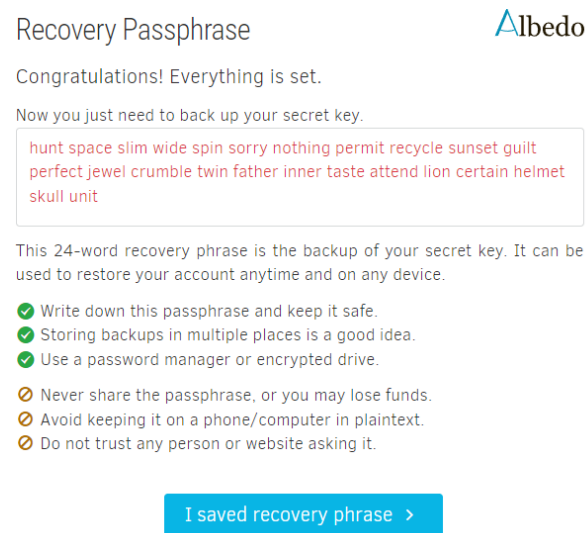
A link 'or use hardware wallet' followed by a button with the Ledger logo and the text 'Ledger'.



# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

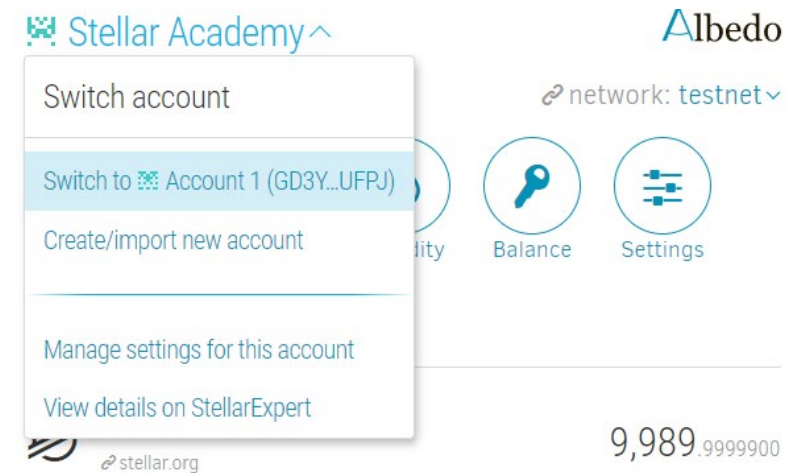
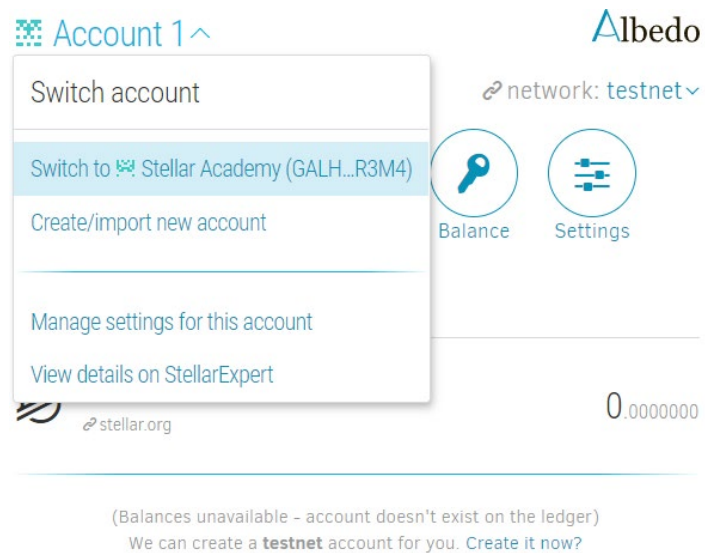
- Once done, the wallet will provide you with a 24-word recovery passphrase, which will be necessary to recover your account, in case you forgot the password. Make sure that you store this passphrase to a safe place and never share it with anyone, since sharing it means giving access to your secret key.
- Click on 'I saved recovery phrase' and your new, empty account is created.



# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- Now that you successfully maintain two Albedo wallet accounts, you can go ahead and switch between them.



# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- As mentioned before, the second account is empty. So, you are going to send some lumens from the Stellar Academy account, to the new account (Account 1).
- In order to do so, first you are going to click on the “Transfer” button and insert the amount you want to transfer, let’s say 10 lumens.
- You will see a notification saying that ‘The recipient account does not exist on the ledger. Would you like to create it before transferring funds?’ and you will click on ‘create it’.
- This is a required step in order for the new account to be activated, since it doesn’t have any lumens yet. Now, you are ready to click on ‘Transfer’.

The image displays two side-by-side screenshots of the Albedo web wallet interface, showing the transfer process from the Stellar Academy account to a new account (Account 1).

**Left Screenshot:**

- Account: Stellar Academy (GALH3K...THR3M4)
- Network: testnet
- Buttons: Transfer, Swap, Liquidity, Balance, Settings
- Transfer | direct
- Recipient Address: GD3YBZNRUDOX27EW4IV4HA05DZ3KOTEXDLUI45KRHSP66C
- Amount: 10 XLM
- Transaction memo: none (optional)
- Warning: The recipient account does not exist on the ledger. Would you like to create it before transferring funds?
- Transfer button

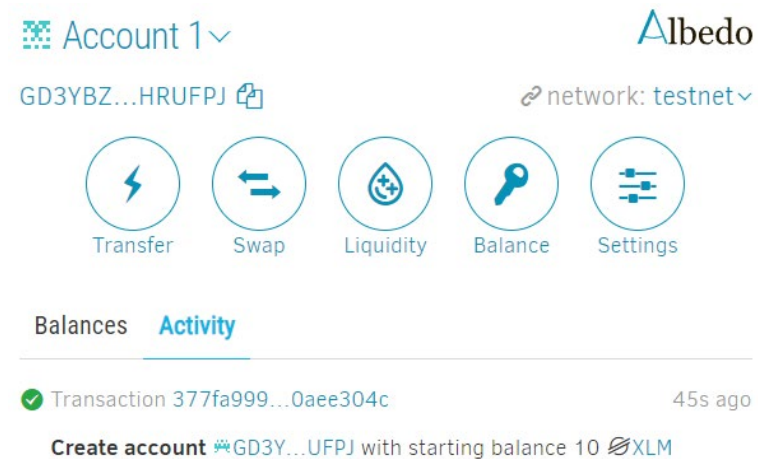
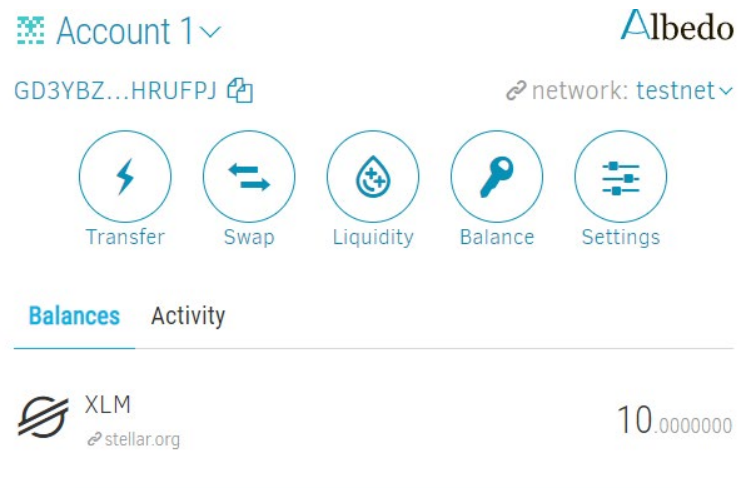
**Right Screenshot:**

- Account: Stellar Academy (GALH3K...THR3M4)
- Network: testnet
- Buttons: Transfer, Swap, Liquidity, Balance, Settings
- Transfer | direct
- Recipient Address: GD3YBZNRUDOX27EW4IV4HA05DZ3KOTEXDLUI45KRHSP66C
- Amount: 10 XLM
- Transaction memo: none (optional)
- Confirmation: The recipient account will be created automatically. Cancel account auto-creation?
- Transfer button

# Self-Assessment Exercises

## Exercise 2 – Albedo Web Wallet

- If the transfer is successful, you will see that the Account 1 is funded with 10 lumens and the transaction has been recorded to its activity.



# Questions?

Contact Us: [Stellar Developers Discord](#)

Twitter: [@StellarOrg](#)



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