

BCDV1013 Blockchain Platforms

Assignment #3 - Algorand

Create an Algorand Testnet Account and 2 associated Algorand Standard Asset

- Create an Algorand Testnet account.
- Create 2 associated ASAs. One of them being an NFT.

MyAlgo is a client-side interface, allowing you to create locally stored private keys that are encrypted with your password. The private keys never leave your device.

1) Create an Algorand Testnet account

1.1) Open MyAlgo in your browser and click Continue

<https://wallet.myalgo.com>

The screenshot shows a web browser window with the title 'Algorand Wallet' and the URL 'https://wallet.myalgo.com/new-account'. The page features the MyAlgo logo and a 'Disclaimer' section with an information icon. The disclaimer text states that using the web wallet does not create an account or hold funds, and that data is stored locally. It also includes a caution about incognito mode and a reminder to verify the URL. A checkbox labeled 'I accept the Terms of Service and want to access MyAlgo' is checked. A blue arrow points to this checkbox. Below the checkbox, another blue arrow points to a blue 'Continue' button. The footer of the page includes the MyAlgo logo and the copyright notice '© 2022 MyAlgo. All Rights Reserved by Rand Labs'.

Algorand Wallet

← → ↻ 🔒 https://wallet.myalgo.com/new-account

MyAlgo Wallet

Disclaimer
Please read carefully.

By accessing your wallet through [MyAlgo.com](https://wallet.myalgo.com) you do not create an account or give us your funds to hold onto. No data leaves your computer or browser. We make it easy for you to create, save, and access your information and interact with the blockchain.

Caution, using the web wallet in incognito mode will require you to go through the process again. Make sure to back up your **mnemonic phrase and private keys**.

Always verify you are on the correct URL:

<https://wallet.myalgo.com>

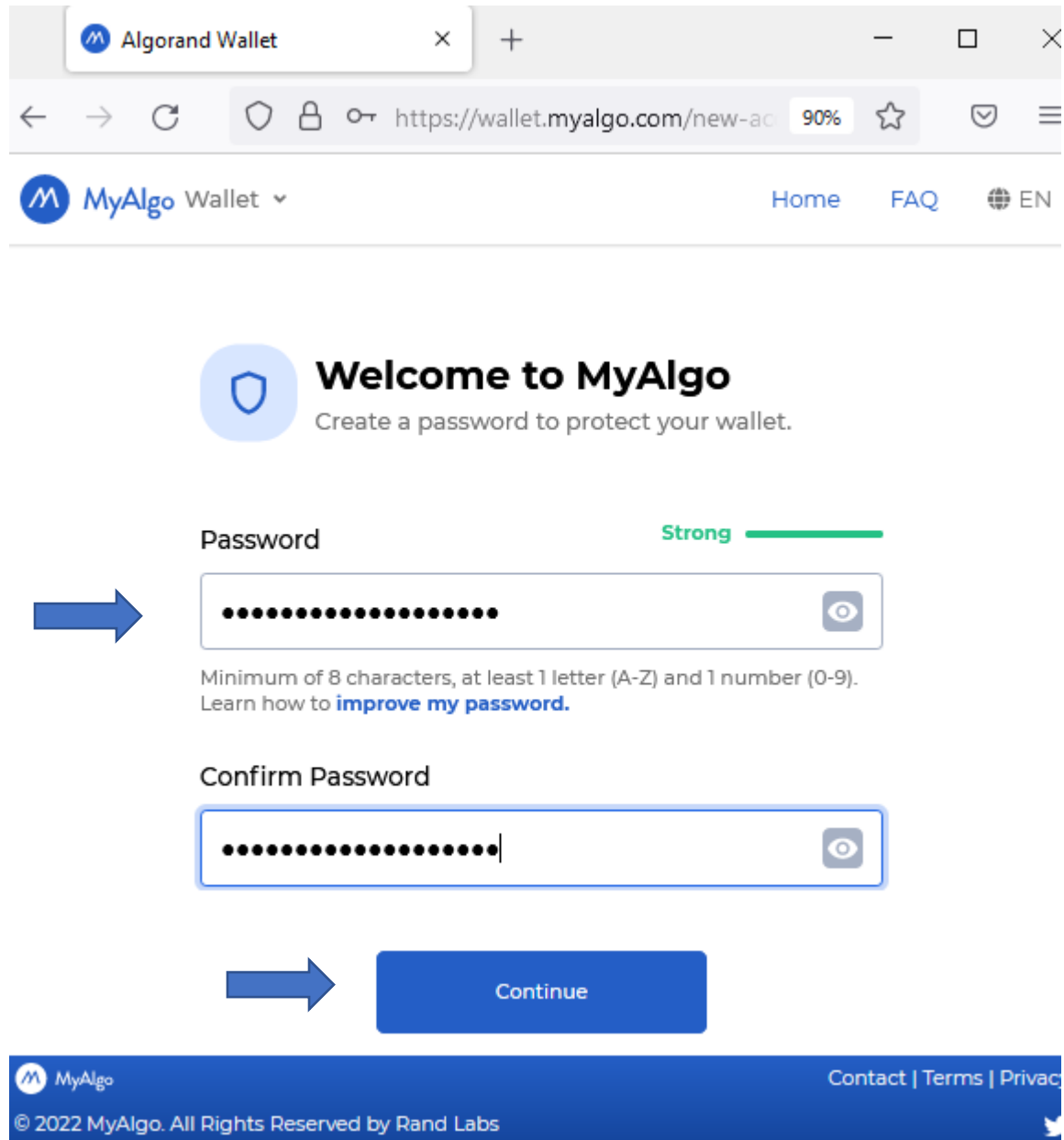
Read more on how to avoid **Scams and Phishing Attacks** to keep your account secure.

☒ I accept the [Terms of Service](#) and want to access MyAlgo

Continue

MyAlgo
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1.2) Create a password to protect your wallet



The screenshot shows a web browser window with the title "Algorand Wallet" and the URL "https://wallet.myalgo.com/new-ac". The page features the MyAlgo logo and navigation links for "Home", "FAQ", and "EN". The main heading is "Welcome to MyAlgo" with the subtext "Create a password to protect your wallet." Below this, there are two password input fields. The first field is labeled "Password" and has a strength indicator showing "Strong" with a green bar. A blue arrow points to this field. The second field is labeled "Confirm Password" and also has a strength indicator. A blue arrow points to the "Continue" button below the fields. The footer contains the MyAlgo logo, copyright information "© 2022 MyAlgo. All Rights Reserved by Rand Labs", and links for "Contact | Terms | Privacy".

Algorand Wallet

https://wallet.myalgo.com/new-ac 90%

MyAlgo Wallet Home FAQ EN

Welcome to MyAlgo
Create a password to protect your wallet.

Password **Strong**

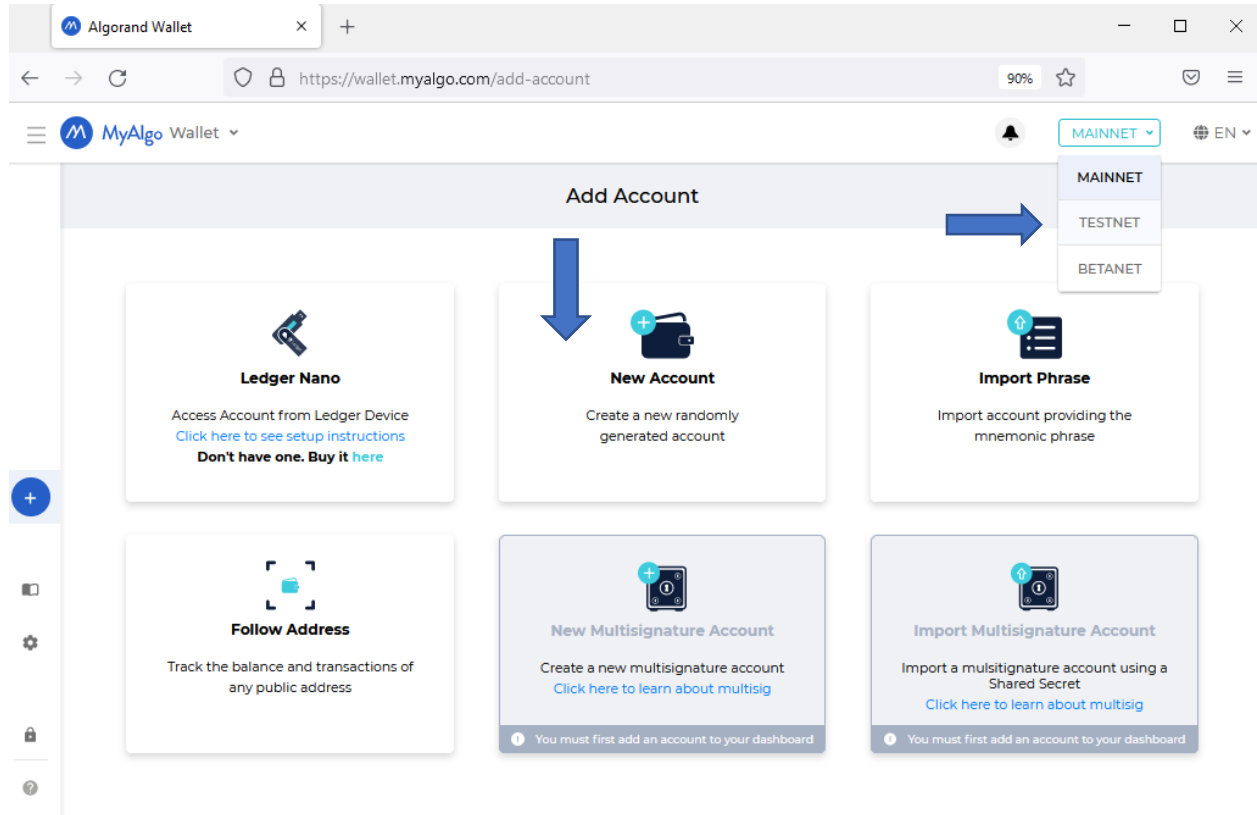
Minimum of 8 characters, at least 1 letter (A-Z) and 1 number (0-9).
Learn how to [improve my password](#).

Confirm Password

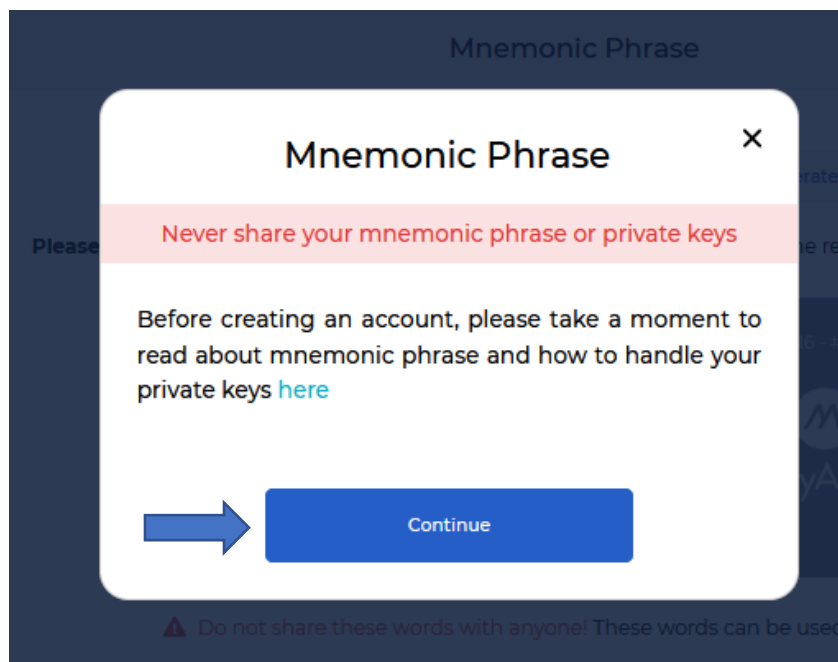
Continue

MyAlgo Contact | Terms | Privacy
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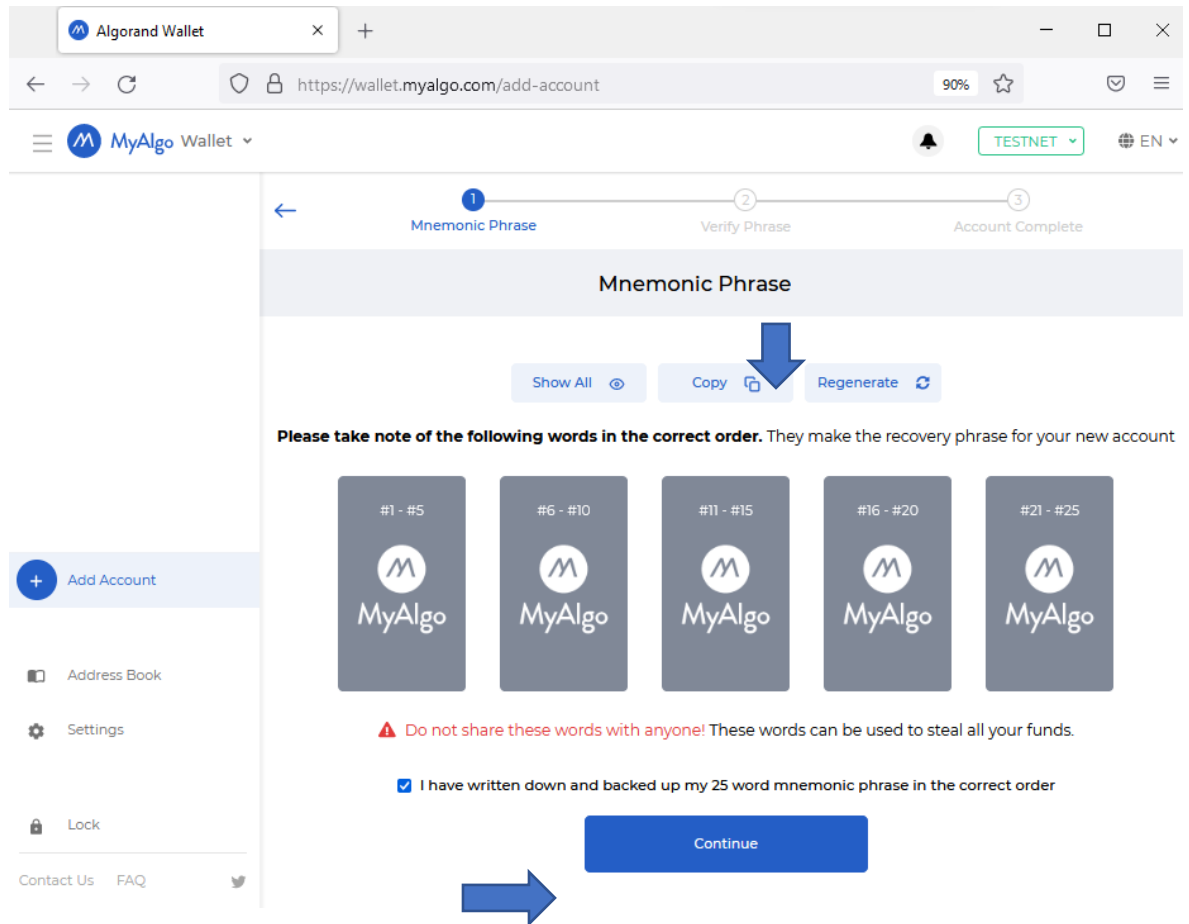
1.3) From the top-right select TESTNET, and then select New Account



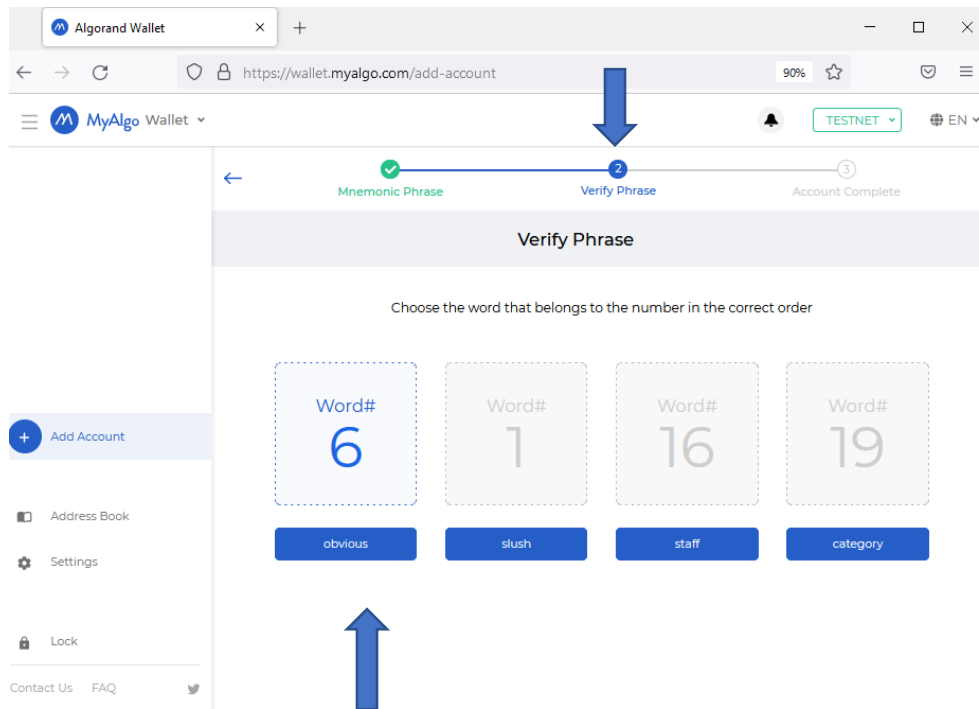
1.4) Take note of the following words in the correct order. They make the recovery phrase for your new account (Mnemonic Phrase). Click Continue.



1.5) Copy and save the Mnemonic Phrase and keep it in a safe place.

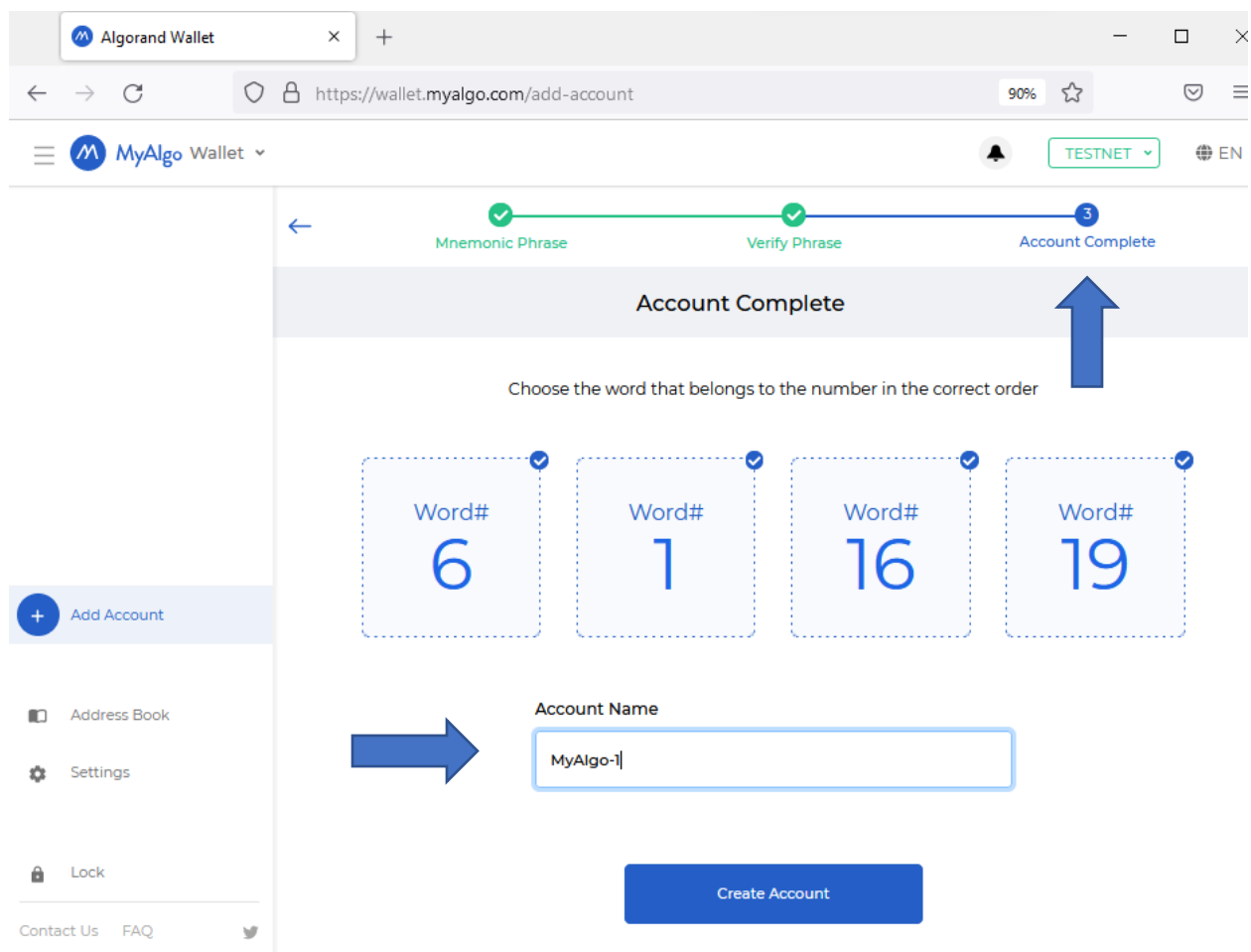


1.6) Verify the Phrase.

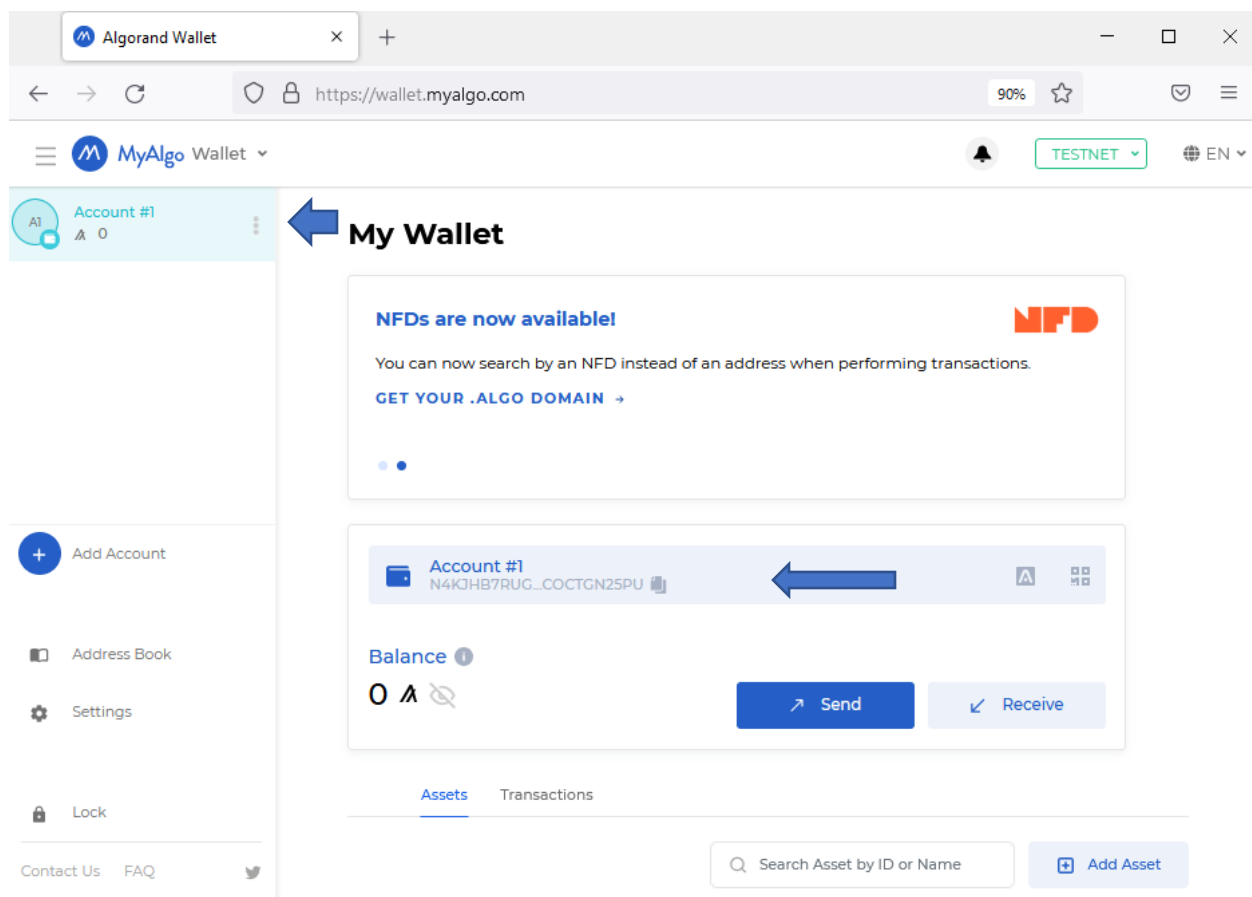


1.7)Verify the Phrase.

Select a name for your account. Click Create Account

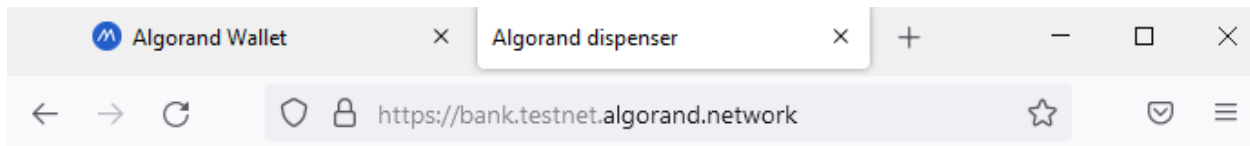


And finally, you will see your account

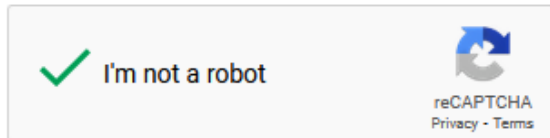


1.1) From this faucet get 10 Algo test token:

<https://bank.testnet.algorand.network/>



Algorand dispenser



The dispensed Algos have no monetary value and should only be used to test applications.

This service is gracefully provided to enable development on the Algorand blockchain test networks.

Please do not abuse it by requesting more Algos than needed.

N4KJHB7RUG6U02XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25PU

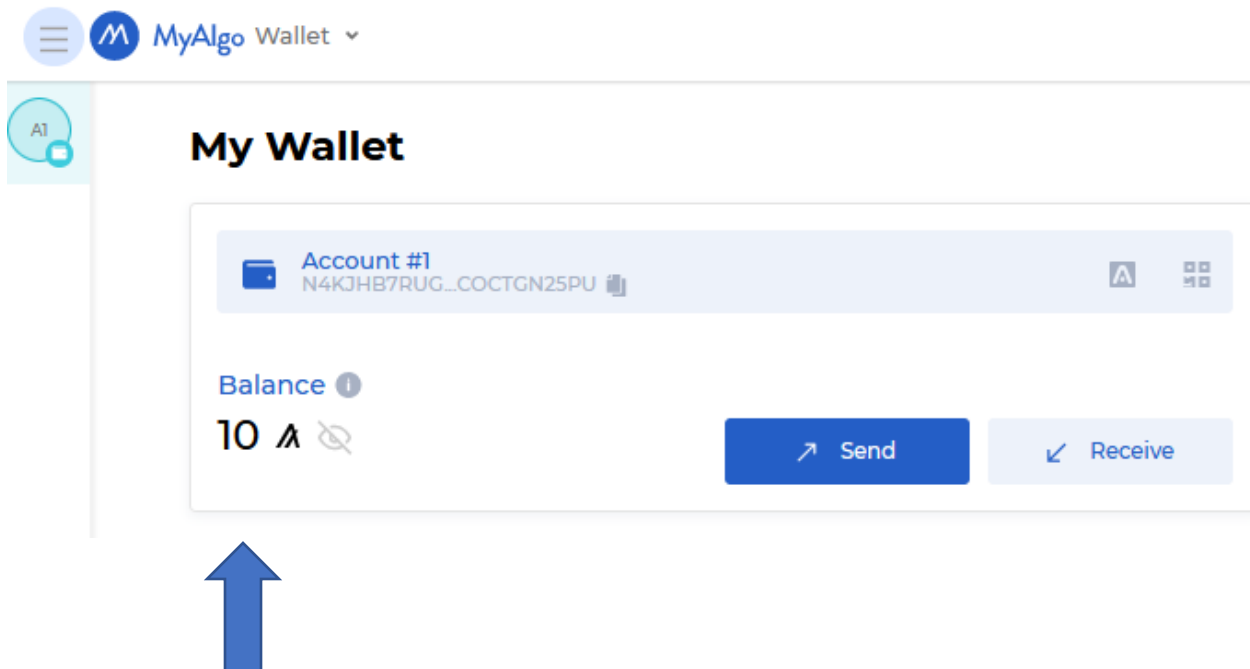
Dispense



Status: Code 200 OK:

"5LMNLU2A7BUPBBF2SNT22RW5QYD4C7HPD66FCLYGHSAATUFKD4KA"

And then check your tokens in your wallet:

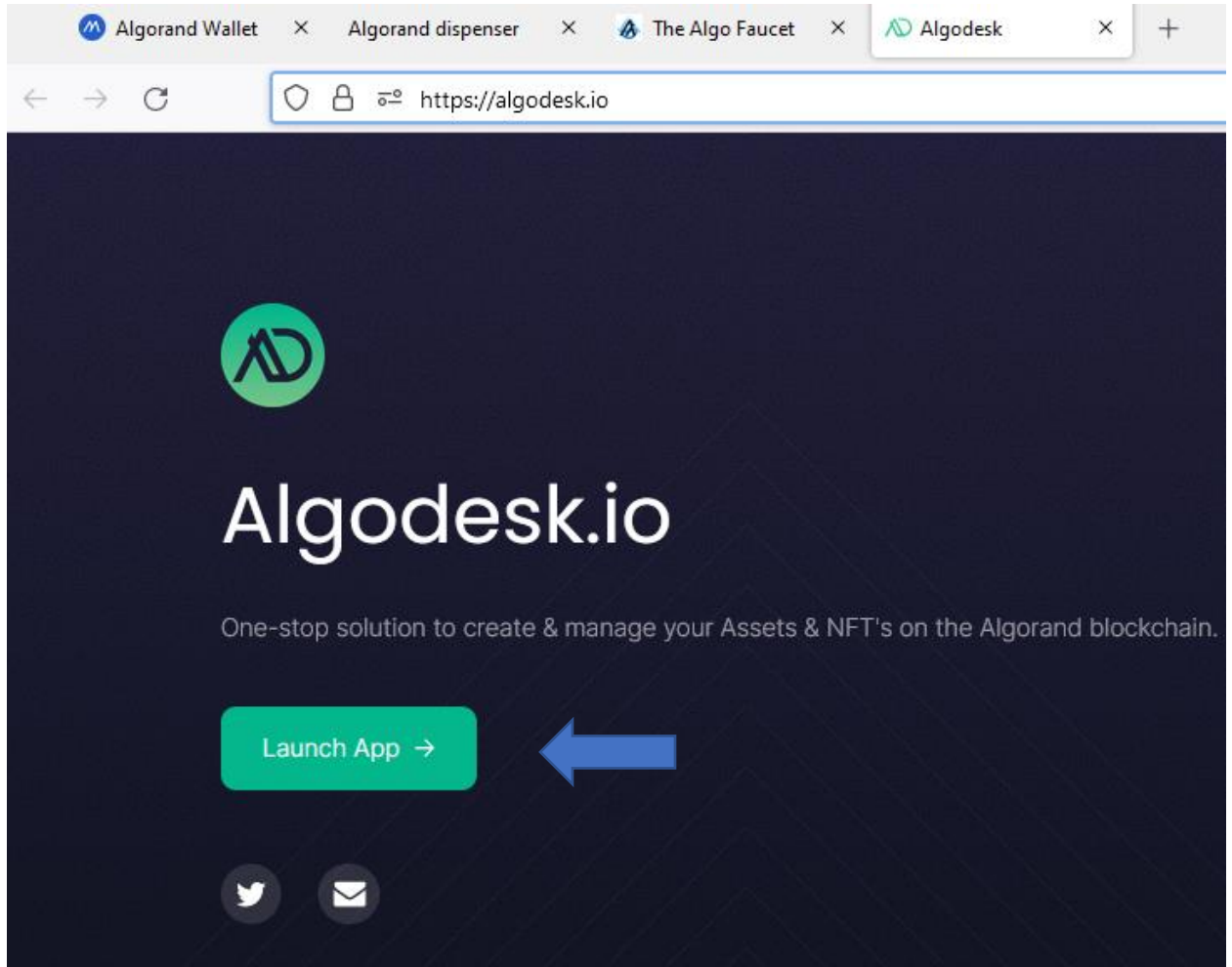


2) Create 2 associated ASAs. One of them being an NFT.

Algodesk is a tool that facilitates the management of your ASA associated with your account.

A) Create a Fungible Token


1) <https://algodesk.io/>




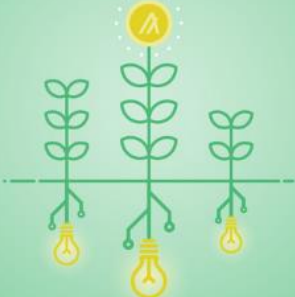
2) Select TestNet and then click connect wallet

Algorand Wallet X Algorand dispenser X The Algo Faucet X Algodesk X Algodesk X + - □ ×



← → ↻ https://app.algodesk.io/#/login ☆



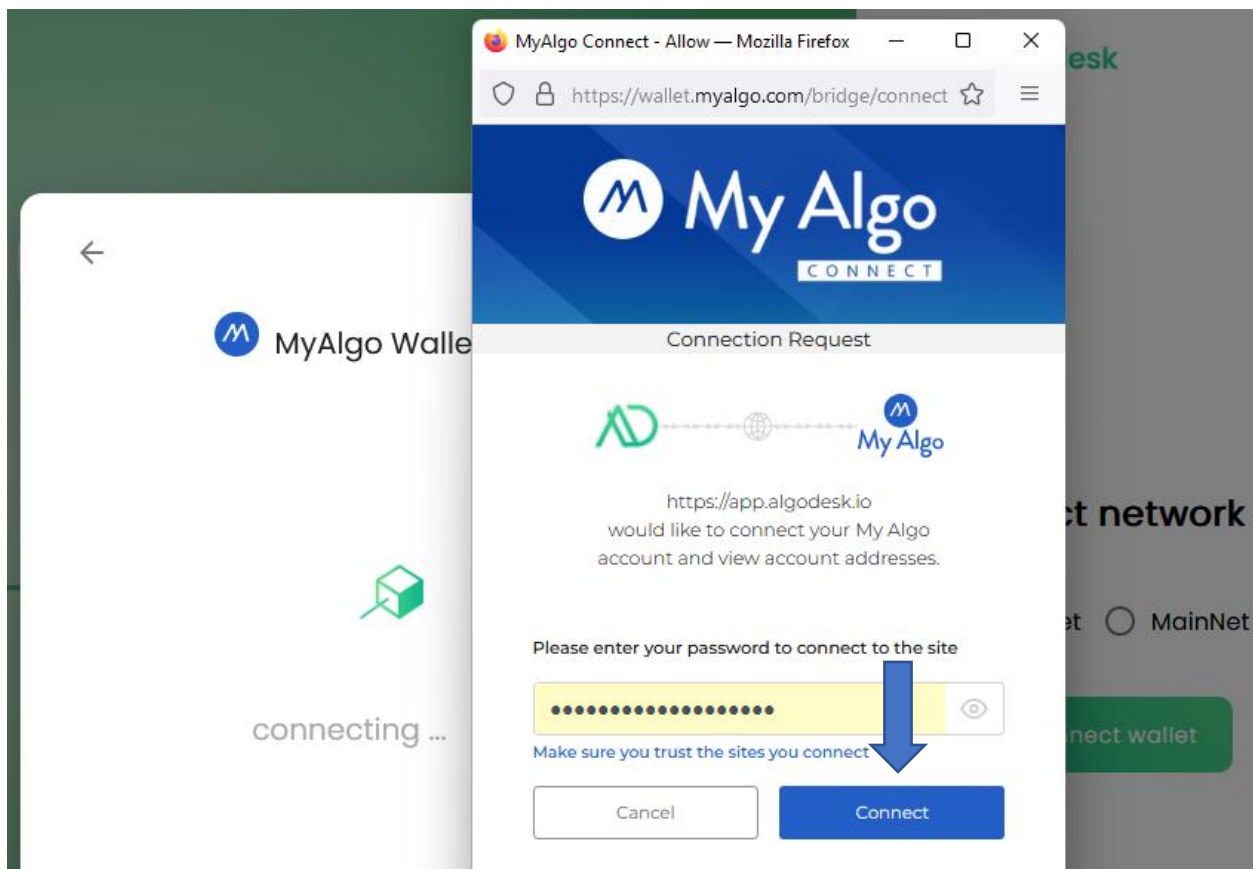
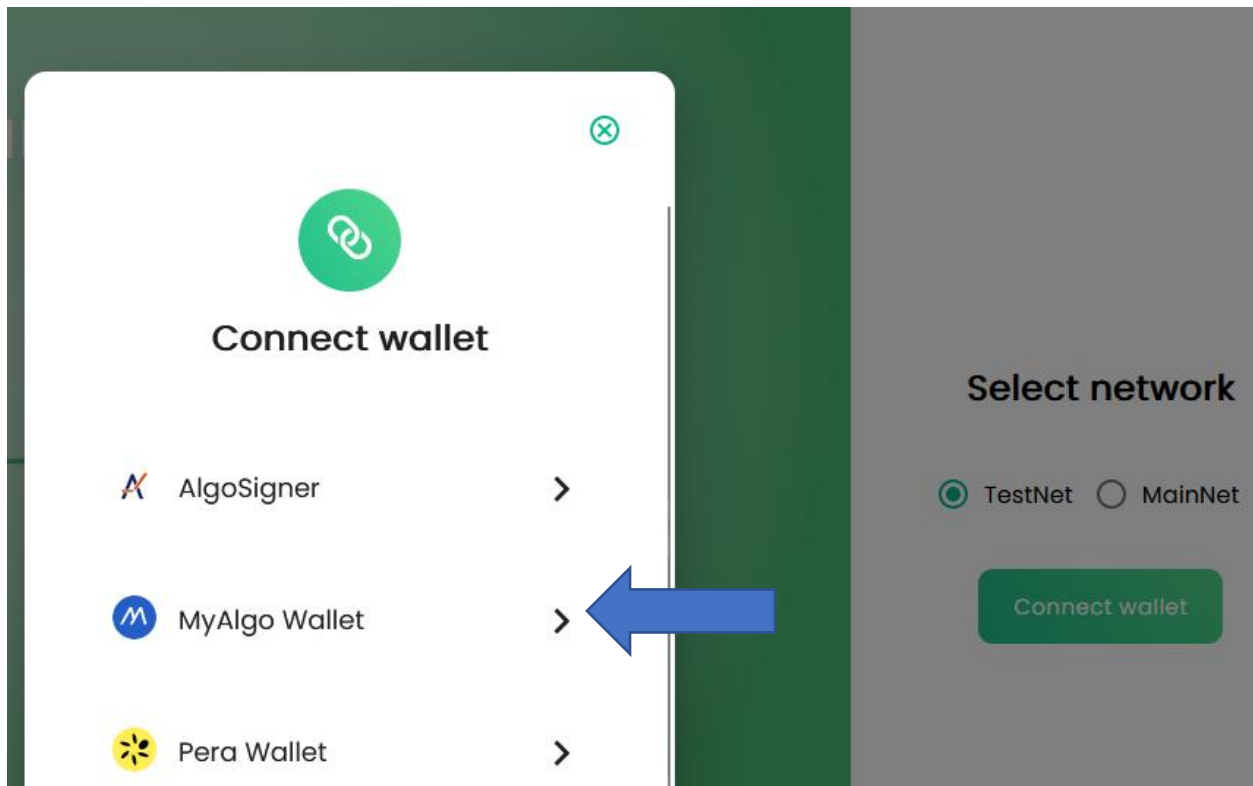
Create & Manage your Assets



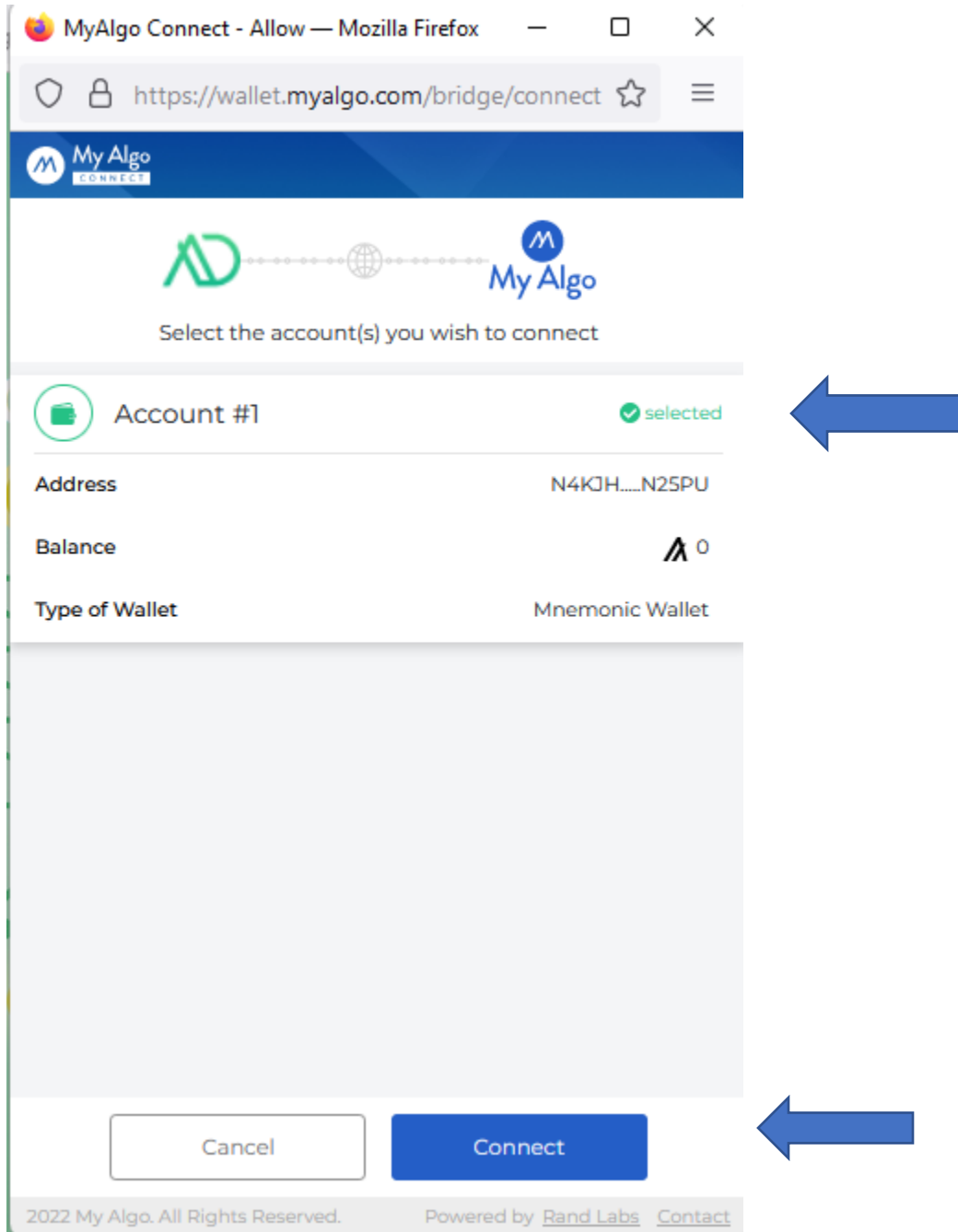
Select network
☒ TestNet ☐ MainNet



3) Select your wallet and click Connect.



4) **Select Account #1 and then click Connect.**



5) In My Dashboard click Create asset

The screenshot shows a web browser with multiple tabs open, including 'Algorand Wallet', 'Algorand dispenser', 'The Algo Faucet', and 'Algodesk'. The active tab is 'Algodesk', displaying the URL 'https://app.algodesk.io/#/portal/dashboard/created-assets'. The page header features the 'Algodesk' logo and a green bar. Below the header, the 'My Dashboard' title is followed by 'TestNet' and 'MainNet' tabs. The dashboard is divided into three sections: 'Created assets' (active), 'Opted assets', and 'NFT collection'. The 'Created assets' section includes a search bar labeled 'Search asset' with a placeholder 'Name', a checkbox for 'Hide 0 balances', and a green 'Create asset' button with a plus icon. A blue arrow points to the 'Create asset' button. On the left side of the dashboard, there is a user profile section with a green circular avatar, a long alphanumeric address, three icons (document, refresh, and share), a link to 'View in explorer', and a balance of '10 A'. At the bottom left, there is a 'Logout' button with a power icon. A stack of papers icon is visible at the bottom right of the dashboard area.

6) Fill out the token specifications such as Name, Unit name, and Total supply.

Asset details

Name *

DarioT

Unit name *

DTK

Total supply *

1000000

Decimals

0

Url

Metadata hash

Asset management

Manager

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

Reserve

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

- 7) In Asset Management you can manage permissions such as Freeze and Clawback. And then click Create.

Asset management

Manager

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

Reserve

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

Freeze

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

Clawback

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

Note

Create

8) Sign the transaction to create the token.

MyAlgo Connect - Sign Transaction — Mo...

https://wallet.myalgo.com/bridge/signtx

My Algo CONNECT Account #1 N4KJH.....N25PU TESTNET

Create Asset (DarioT) ✓ Approved

Total Supply	1,000,000
Manager Account	N4KJH.....N25PU

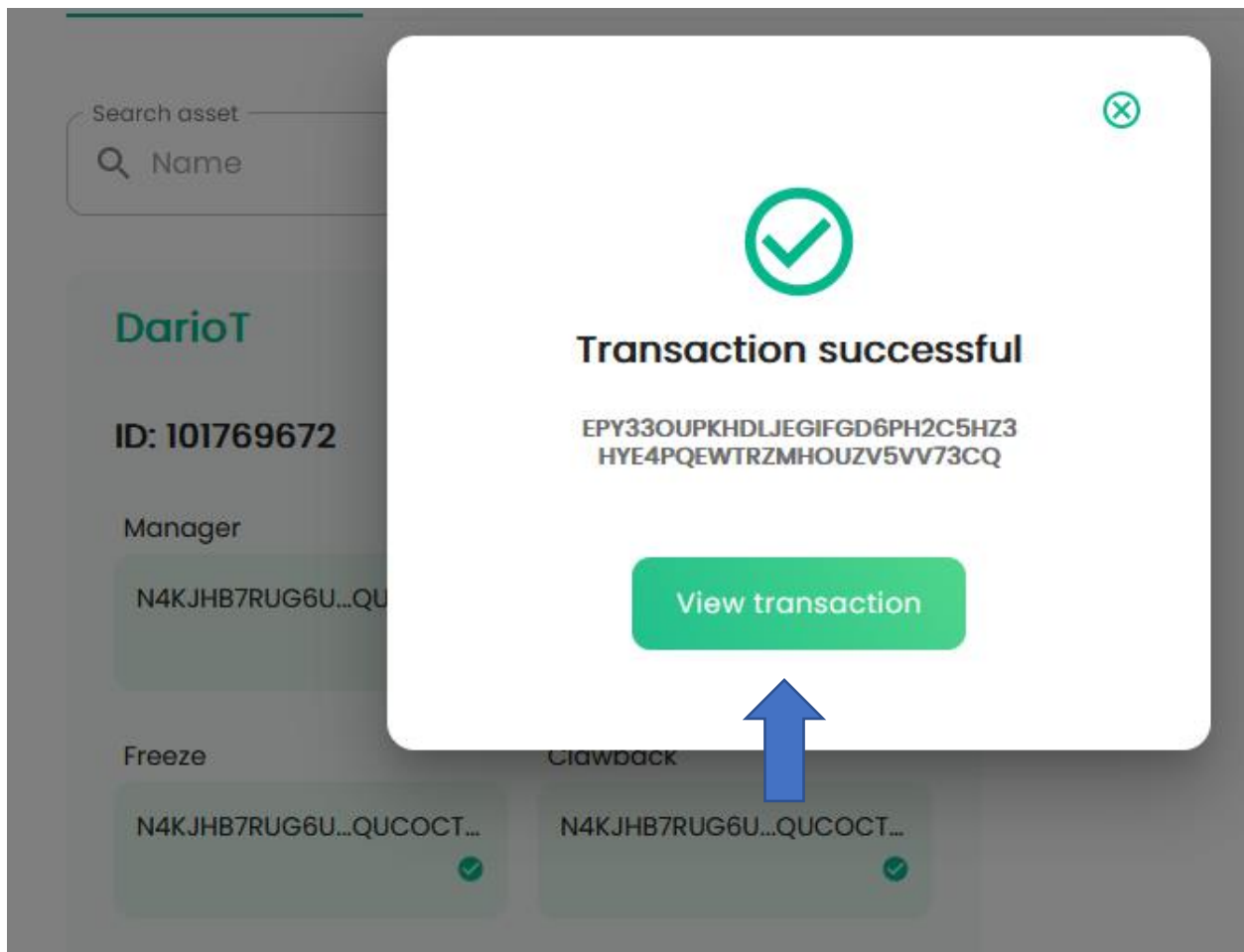
Please enter your password to sign the transaction

.....

Cancel Sign


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9) Click View transaction



Transaction Overview on Algo Explorer:

<https://testnet.algoexplorer.io/tx/EPY33OUPKHDLJEGIFGD6PH2C5HZ3HYE4PQEWTRZMHOUZV5VV73CQ>



Algo Explorer
Algorand Blockchain Explorer

Search by Address / Tx ID / Group Tx ID / Block / Asset Name / Asset ID / App ID

TESTNET

Assets Apps Statistics Blockchain Tools API Governance

Transaction Overview

Transaction ID EPY33OUPKHDLJEGIFGD6PH2C5HZ3HYE4PQEWTRZMHOUZV5VV73CQ	Timestamp Fri, 29 Jul 2022 20:04:36 GMT
Block 23136067	Type Config

Transaction Details

Asset Name:	DarioT
Asset Unit:	DTK
Asset ID:	101769672 (DarioT)
Asset Reason:	Creation
Total Supply:	1,000,000 DTK
Decimals:	0
Default Frozen:	False
Creator Account:	N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCCOCTGN25PU

Total Supply:	1,000,000 DTK	
Decimals:	0	
Default Frozen:	False	
Creator Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHC2WQUCOCTGN25PU	Copy
Manager Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHC2WQUCOCTGN25PU	Copy
Reserve Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHC2WQUCOCTGN25PU	Copy
Freeze Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHC2WQUCOCTGN25PU	Copy
Clawback Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHC2WQUCOCTGN25PU	Copy

➤ More Information

10) Check your token on Algodesk and in your wallet.

**N4KJHB7RUG6U02XUU3B2Y
KXUFQOPPSYJBWVRVUIZQH
CU2WQUCOCTGN25PU**

View in explorer

Balance: 9.999

Created assets Opted assets NFT collection

Search asset

Name

☐ Hide 0 balances

DarioT

ID: 101769672 Balance : 1,000,000 DTK

Manager

N4KJHB7RUG6U...QUCOCT...

Reserve

N4KJHB7RUG6U...QUCOCT...

Freeze

N4KJHB7RUG6U...QUCOCT...

Clawback

N4KJHB7RUG6U...QUCOCT...

Account #1

9.999

TESTNET

EN

My Wallet

Account #1

N4KJHB7RUG...COCTGN25PU

Balance

9.999

Send Receive

Buy Algofi

MoonPay

You can now add funds to your wallet from a credit/debit card using Moonpay!

Assets Transactions

Search Asset by ID or Name Add Asset

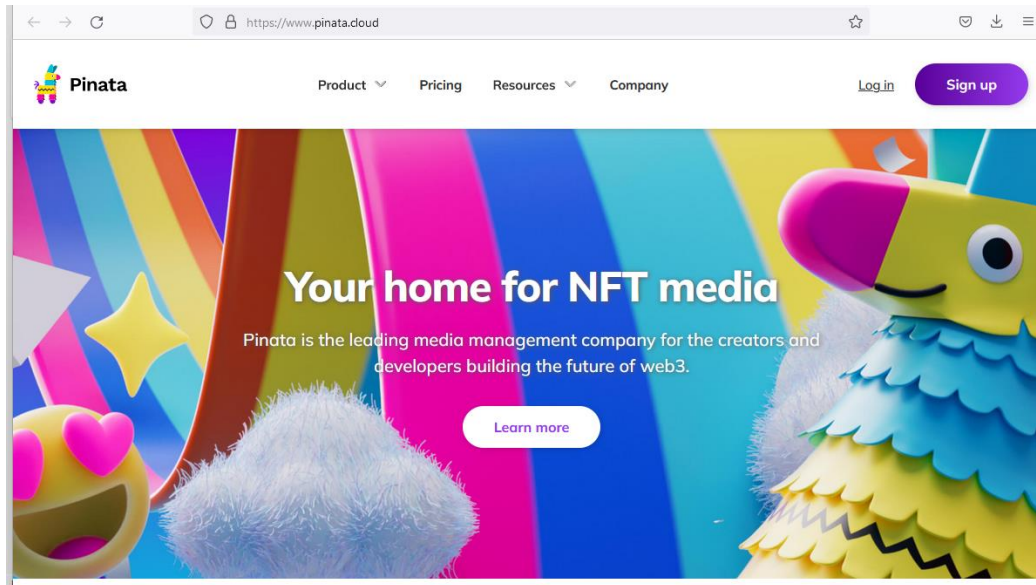
Asset	Balance	Price	Actions
ALGO	9.999	-	Send Receive
DTK ID 101769672	1,000,000	-	Send Receive ...

Total 2 Assets 1 of 1

B) Create an NFT!

Have the file ready that you want to turn into an NFT (jpgs, gifs, videos, word documents, PDFs, etc).

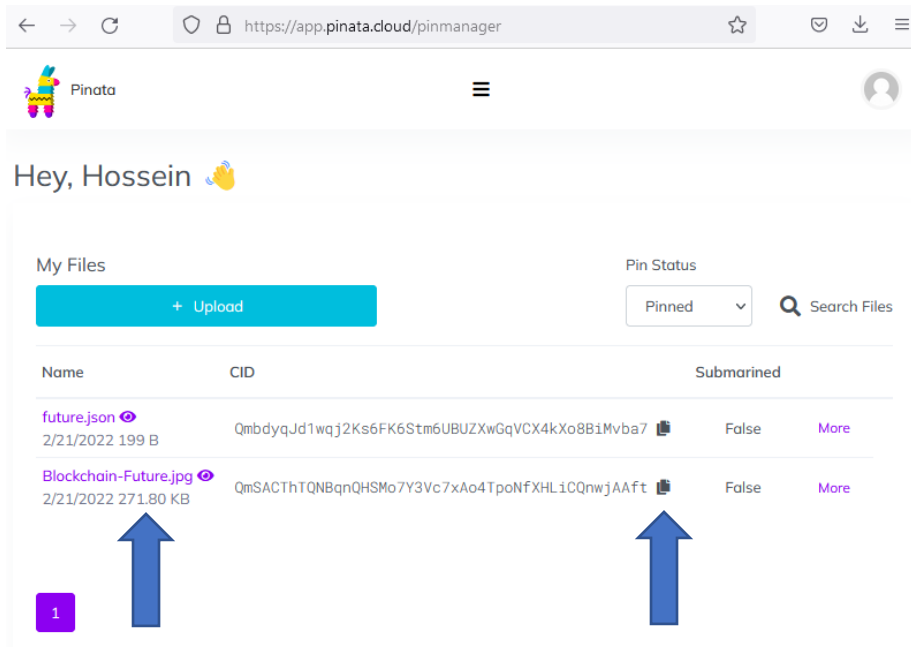
- 1) Create a free account on Pinata Cloud <https://pinata.cloud/>.



- 2) Upload the image for your NFT.

And then, copy the IPFS CID string of text that is created by pressing the small black icon to the right of it. You will need this later.

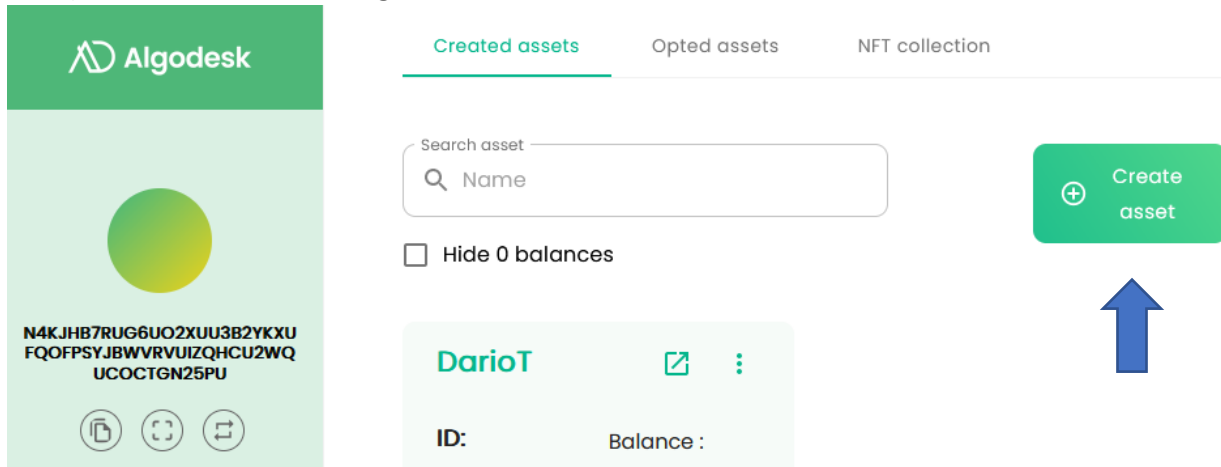
Then, click on the file you just named in the "name" column. Make sure it displays correctly. Copy the URL that appears in your browser to display your file. You will need this later.



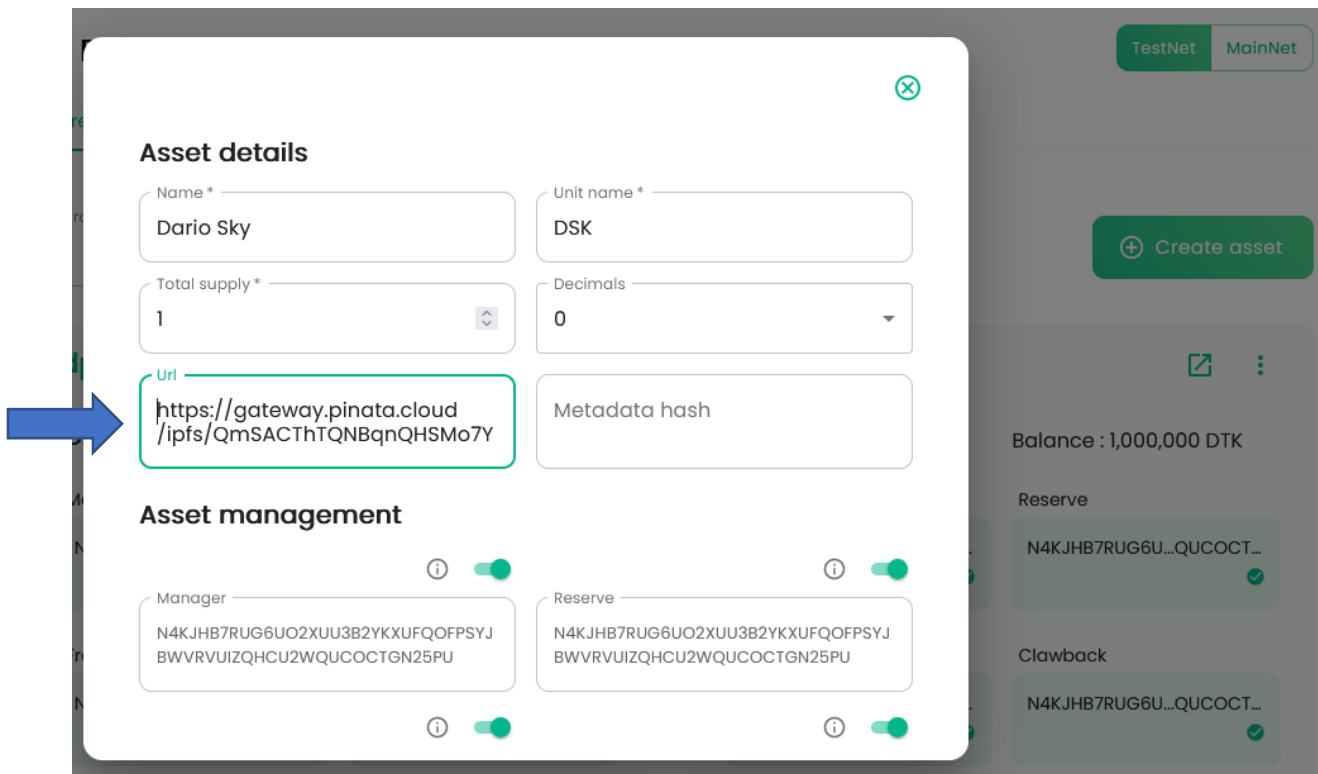
CID: QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft

URL: <https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft>

3) Click Create asset in Algodesk.



- 4) Enter the NFT specifications such as Name, Unit name, and Total supply, AND Fill out "Asset Name" with whatever you wish to call your NFT. For example, "Dario Sky". Fill out "Unit Name", which is whatever you wish to call your unit. For example, DSK. Fill out "Total Supply". If you are only minting one NFT, this would be 1. Keep "decimals" 0 for things like collectables and NFT art. "Asset Url" is the URL is copied from Pinata Cloud "Pin Manager" <https://pinata.cloud/> and Just copy and paste into this field.



- 5) In the "Metadata Hash", copy the IPFS CID that you created from Pinata Cloud "Pin Manager" <https://pinata.cloud/>. Just copy and paste into this field.

OR

*Optional (or keep blank) - Paste the IPFS CID into MD5 Hash Generator

<https://www.md5hashgenerator.com/> . Press the blue "generate" button, then copy the string of text that it generates and paste into the "Metadata Hash" field as a **unique asset identifier**.

Web Dev ▾	Conversion ▾	Encoders / Decoders ▾	Formatters ▾	Internet ▾	English
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MD5 Hash Generator

Use this generator to create an MD5 hash of a string:

QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft

Generate →

Your String	QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft		
MD5 Hash	aa3d52cf597c979897d9012560bf8ced	Copy	
SHA1 Hash	ad9a41d716374038b65f6d7d01728d42fa045d84	Copy	

MD5 Hash: aa3d52cf597c979897d9012560bf8ced



Asset details

Name *

Dario Sky

Unit name *

DSK

Total supply *

1

Decimals

0

Url

<https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y>

Metadata hash

aa3d52cf597c979897d9012560bf8ced

Asset management



Manager

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

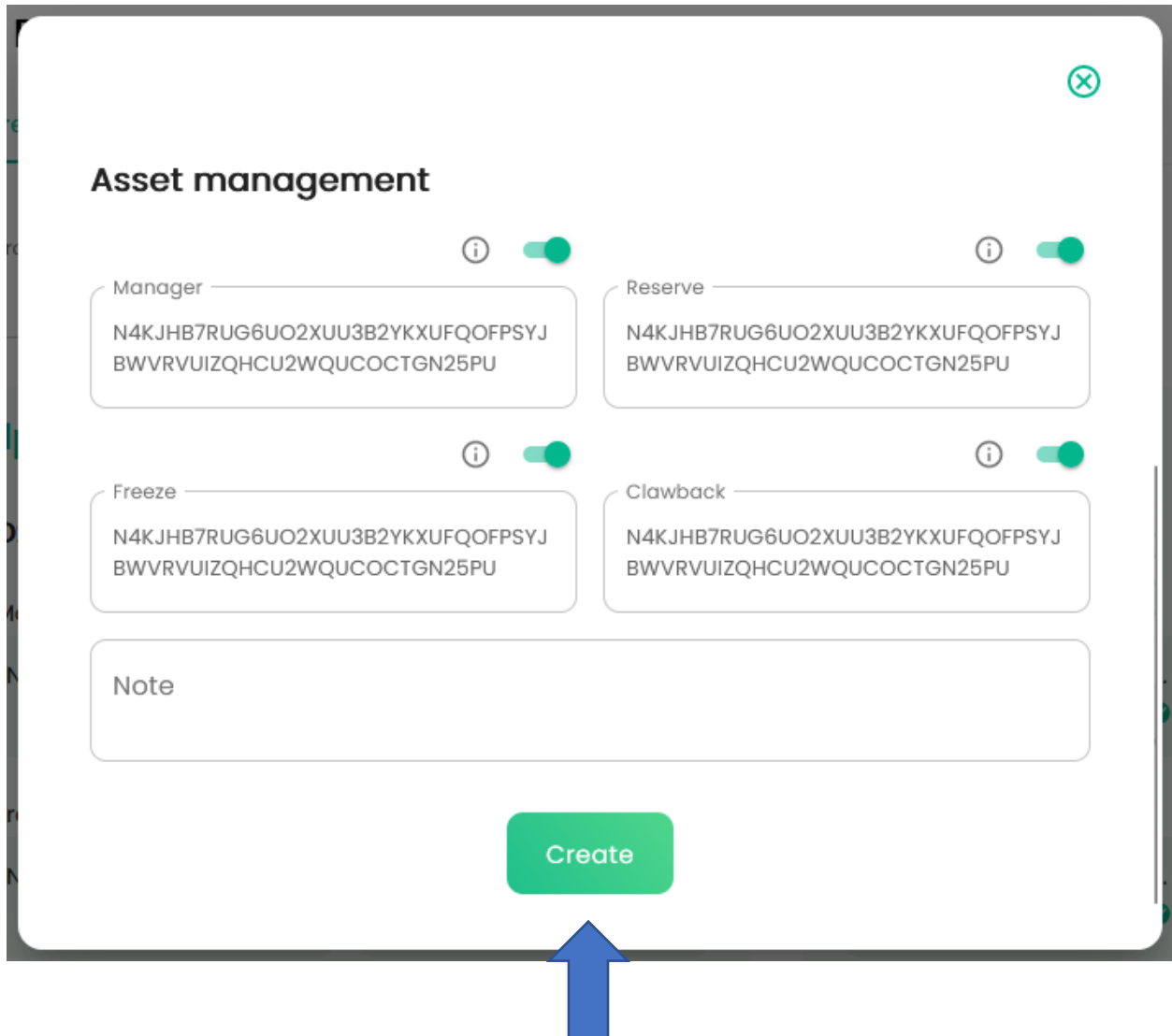


Reserve

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU



- 6) For NFTs, especially when you are selling these, erase the "freeze address" and "clawback address". A freeze prevents reselling of NFTs and a clawback allows you to recall all assets from the user you sent it to. No one wants to buy a frozen or clawbacked NFT. NOTE: Once you remove these last two addresses, it can never be changed. AND then click Create.



The screenshot shows a web interface titled "Asset management" with a close button (X) in the top right corner. Below the title, there are four sections, each with an information icon (i) and a green toggle switch:

- Manager**: Contains the address N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ BWVRVUIZQHCU2WQUCOCTGN25PU.
- Reserve**: Contains the address N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ BWVRVUIZQHCU2WQUCOCTGN25PU.
- Freeze**: Contains the address N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ BWVRVUIZQHCU2WQUCOCTGN25PU.
- Clawback**: Contains the address N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ BWVRVUIZQHCU2WQUCOCTGN25PU.

Below these sections is a "Note" text area. At the bottom center is a green "Create" button, which is highlighted by a large blue arrow pointing upwards.

7) Sign the transaction to create the NFT token.

The screenshot shows a web browser window titled "MyAlgo Connect - Sign Transaction — Mo...". The address bar displays "https://wallet.myalgo.com/bridge/signtx". The page header includes the "My Algo CONNECT" logo, the account name "Account #1" with address "N4KJH.....N25PU", and a "TESTNET" button. The main content area shows "Create Asset (Dario Sky)" with a green "Approved" status. Below this, it lists "Total Supply" as 1 and "Manager Account" as N4KJH.....N25PU. A large grey rectangular area is present below the asset details. At the bottom, a prompt says "Please enter your password to sign the transaction" above a password input field with a toggle icon. Below the input field are "Cancel" and "Sign" buttons. A blue arrow points to the "Sign" button. The footer contains "2022 My Algo. All Rights Reserved.", "Powered by Rand Labs", and a "Contact" link.

MyAlgo Connect - Sign Transaction — Mo...

https://wallet.myalgo.com/bridge/signtx

My Algo CONNECT Account #1 N4KJH.....N25PU TESTNET

Create Asset (Dario Sky) Approved

Total Supply 1

Manager Account N4KJH.....N25PU

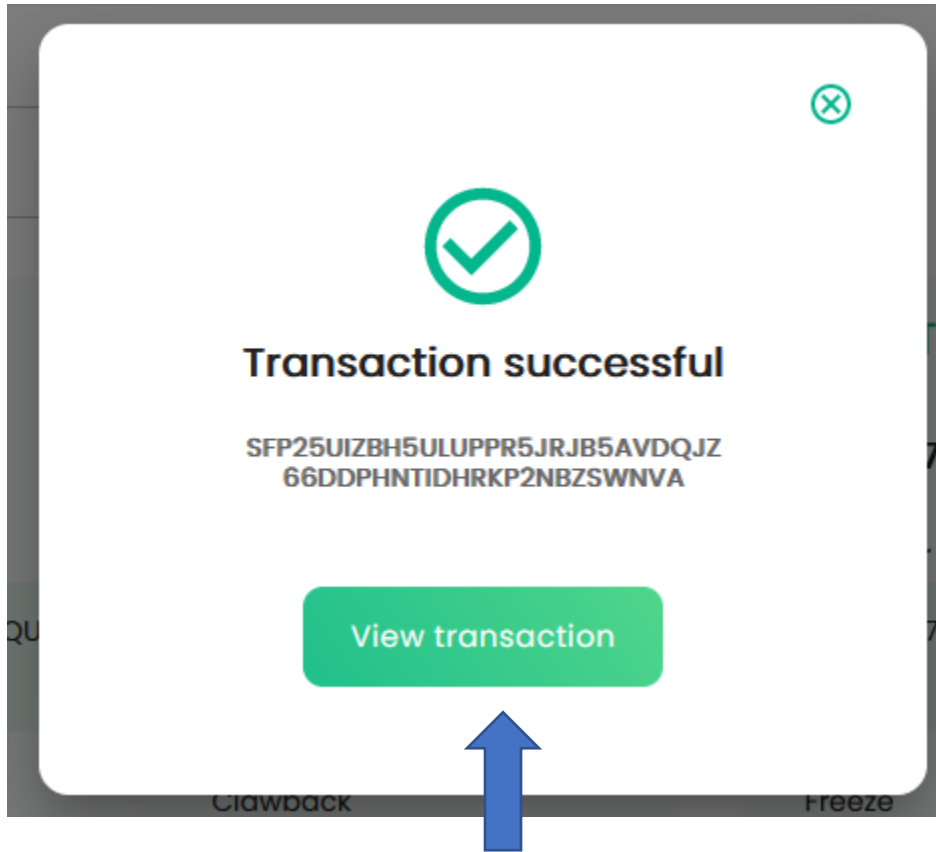
Please enter your password to sign the transaction

.....

Cancel Sign

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8) Click View transaction



Transaction Overview on Algo Explorer:

<https://testnet.algoexplorer.io/tx/SFP25UIZBH5ULUPPR5JRJB5AVDQJZ66DDPHNTIDHRKP2NBZSWNVA>

Algo Explorer
Algorand Blockchain Explorer

Search by Address / Tx ID / Group Tx ID / Block / Asset Name / Asset ID / App ID

TESTNET

Assets Apps Statistics Blockchain Tools API Governance

Transaction Overview

Transaction ID
SFP25UIZBH5ULUPPR5JRJB5AVDQJZ66DDPHNTIDHRKP2NBZSWNVA

Timestamp
Sat, 30 Jul 2022 00:10:37 GMT

Block
23139559

Type
Config


Transaction Details

Asset Name:	Dario Sky
Asset Unit:	DSK
Asset ID:	101792190 (Dario Sky)
Asset Reason:	Creation
URL:	https://gateway.pinata.cloud/ipfs/QmSACThTQNbnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft
Total Supply:	1 DSK
Decimals:	0
Default Frozen:	False




Creator Account:	N4KJHB7RUG6UO2XUU3B2YKXUFQFSPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Manager Account:	N4KJHB7RUG6UO2XUU3B2YKXUFQFSPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Reserve Account:	N4KJHB7RUG6UO2XUU3B2YKXUFQFSPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Freeze Account:	N4KJHB7RUG6UO2XUU3B2YKXUFQFSPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Clawback Account:	N4KJHB7RUG6UO2XUU3B2YKXUFQFSPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy

[More Information](#)


9) Check your NFT on Algodesk and Algo Explorer.




**N4KJHB7RUG6UO2XUU3B2Y
KXUFQOFPSYJBWVRVUIZQH
CU2WQUCOCTGN25PU**






[View in explorer](#)

Balance: 9.997 

Search asset


 Name

☐ Hide 0 bal


Dario Sky

ID: 101792190Balance : 1 DSK

Manager

N4KJHB7RUG6U...QUCOCT...

Reserve

N4KJHB7RUG6U...QUCOCT...

Asset Overview



Dario Sky

NOT VERIFIED

|

ID 101792190

|

<https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft>

Profile

Information not provided. Creators, please [log in](#) to AlgoExplorer and head over to the [Asset Verification Module](#) to provide the asset's details.

General

Technical Information

Circulating Supply

0

Total Supply

1

ID

101792190

Copy

Unit name

DSK

Reserve Account

Copy

[N4KJHB7RUG6UO2XUJ3B2YKXUFOQFPSYJBWVRVUIZQHCUZWQUCOCTGN25...](#)

Creator Account

Copy

[N4KJHB7RUG6UO2XUJ3B2YKXUFOQFPSYJBWVRVUIZQHCUZWQUCOCTGN25...](#)

Decimals

0

Default Frozen

False

Total Txs

1

Transactions

1

of 1

⏪

⏩

⏴

⏵

TxID	Block	Age	Amount	From	To	Fee	Type
SFP25UIZBH5ULUPPR5JR...	23139559	5 min ago		N4KJHB7RUG6UO2XUJ3B2YKXUFOQFPSYJBWVRVUIZQHCUZWQUCOCTGN25...	Asset 101792190	⚡ 0.001	Config

1

of 1

⏪

⏩

⏴

⏵

Asset Overview



Dario Sky

NOT VERIFIED

ID 101792190

<https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft>

Profile

Information not provided. Creators, please [log in](#) to AlgoExplorer and head over to the [Asset Verification Module](#) to provide the asset's details.

General

Technical Information

Creation Tx

Copy

[SFP25UIZBH5ULUPPR5JRJB5AVDQJZ66DDPHNTIDHRKP2NBZSWNVA](#)

Created at round

[23139559](#)

Date of creation

7/29/2022

Manager Account

Copy

[N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25...](#)

Freeze Account

Copy

[N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25...](#)

Clawback Account

Copy

[N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25...](#)

Metadata Hash

—

Transactions

1

of 1

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TxID	Block	Age	Amount	From	To	Fee	Type
SFP25UIZBH5ULUPPR5JR...	23139559	8 min ago		N4KJHB7RUG6UO2XUU3... →	Asset 101792190	⌵ 0.001	Config

1

of 1

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10) Check your NFT in your wallet.


My Wallet

Account #1
N4KJHB7RUG...COCTGNZ5PU

Balance ⓘ
9.997 

 Send

 Receive

NFTs are now available! 














You can now search by an NFT instead of an address when performing transactions.

GET YOUR .ALGO DOMAIN →

Assets Transactions

Search Asset by ID or Name

Add Asset

Asset	Balance	Price ▼	Actions
 ALGO 	9.997	-	 Send  Receive
 DTK ID 101769672	1,000,000	-	 Send  Receive ...
 dpT ID 101773381	1	-	 Send  Receive ...
 DSK ID 101792190	1	-	 Send  Receive ...

Finally, by your NFT URL, you can see the image of your NFT!



Created by:
Hossein Hesami
George Brown College
Blockchain Development Program