Goerli Test Network and ERC-20 Tokens

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☞ TERMINOLOGIES:

What is Testnet?

Testnet to put in simple terms is an instance of blockchain technology on which we can experiment and test out different aspects of our development without the risk of using real funds.

So for example:

1 Ether token at this time costs approximately PKR 300,000. Would you want to spend this much amount just to learn how does the Ethereum network or buying and spending of tokens work? NO

You would work in a test environment where there is no risk of losing actual money. Testnet is used specifically for testing and experimentation purposes.

What is Goerli ETH?

Goerli is an Ethereum test network and GoerliETH are the tokens of Goerli testnet that allows for blockchain development testing before deployment the main Ethereum network. In our tasks we will be using Goerli ETH tokens and its network as a way to test, learn and experiment with blockchain.

What is testnet Faucet?

Testnet Faucets distribute test coin/tokens rather than real coins/tokens. We will be using three different Testnet faucets to get ourselves free GoerliETH tokens in our Metamask wallet.

What is gas fee?

Gas fee is a blockchain transaction fee that is paid to network validators for their service to blockchain. This is almost similar to when we transfer cash using Jazz cash services we have to pay a certain amount of fee for the transaction to complete.

What are ERC-20 Tokens?

ERC-20 is a standard — a set of rules to develop fungible tokens and for them to interact with smart contracts. With ERC-20 we developers can create our own tokens on top of the Ethereum network. ERC-20 Tokens have the following properties:

1. Fungible   — The code of each individual token is the same as any other, though transaction histories can be used to identify and separate out the tokens involved.
2. Transferable — They can be sent from one address to another.
3. Fixed supply — A fixed number of tokens must be created so that developers cannot issue more tokens and raise the supply.

Get free GoerliETH tokens from testnet faucets:

1. Go to faucets.chain.link
   a. Click Connect wallet
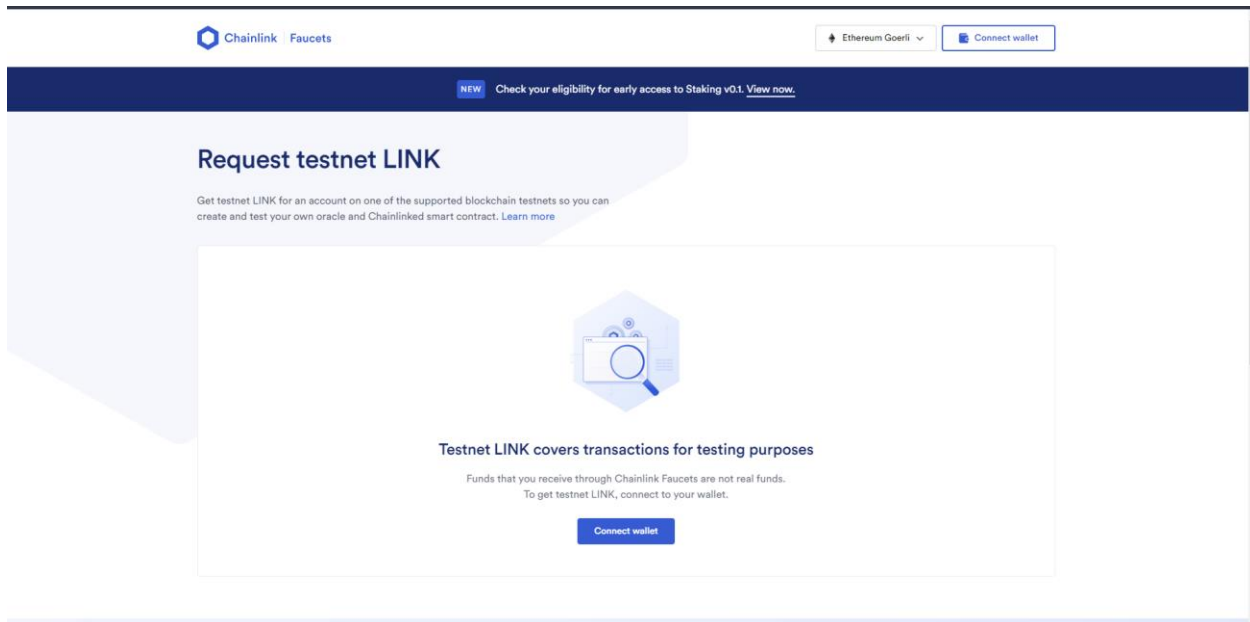
   b. Select Metamask
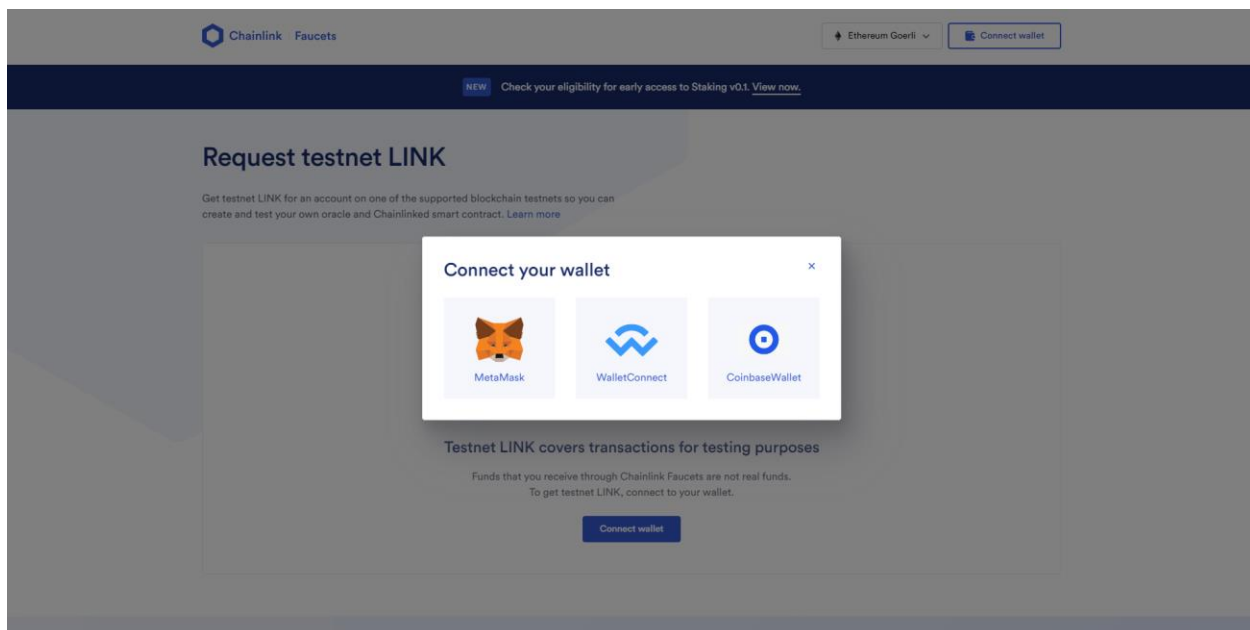
c. This selection will trigger your Metamask wallet to open and ask for permission to allow to connect to this faucet. Click on next to proceed.
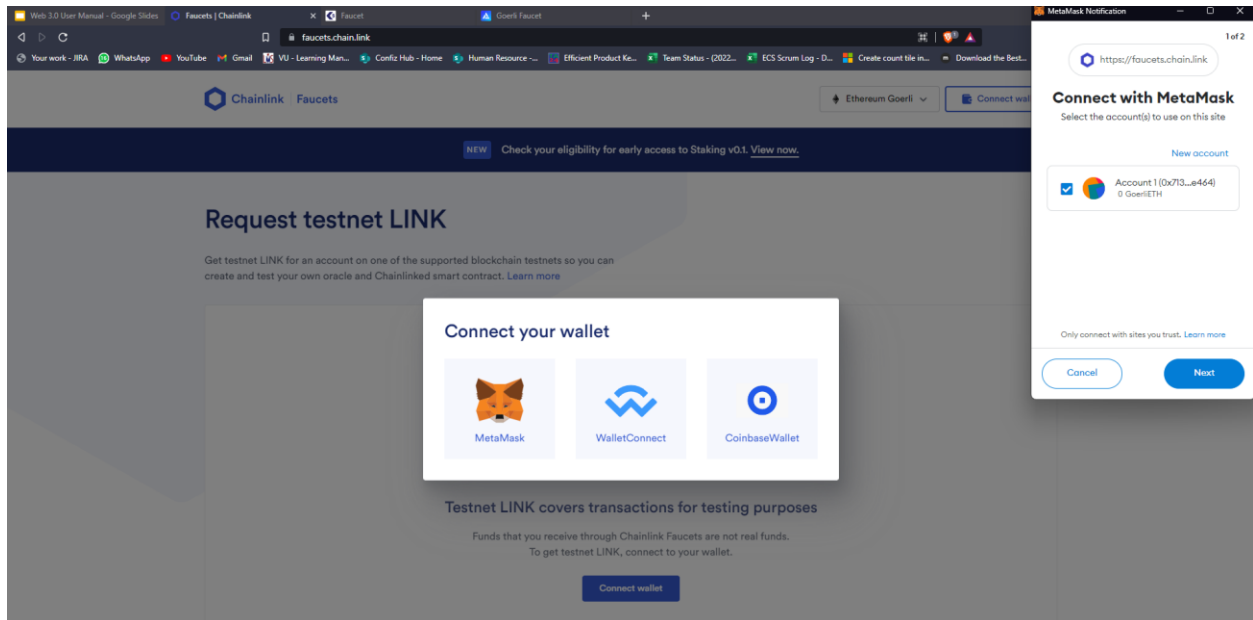
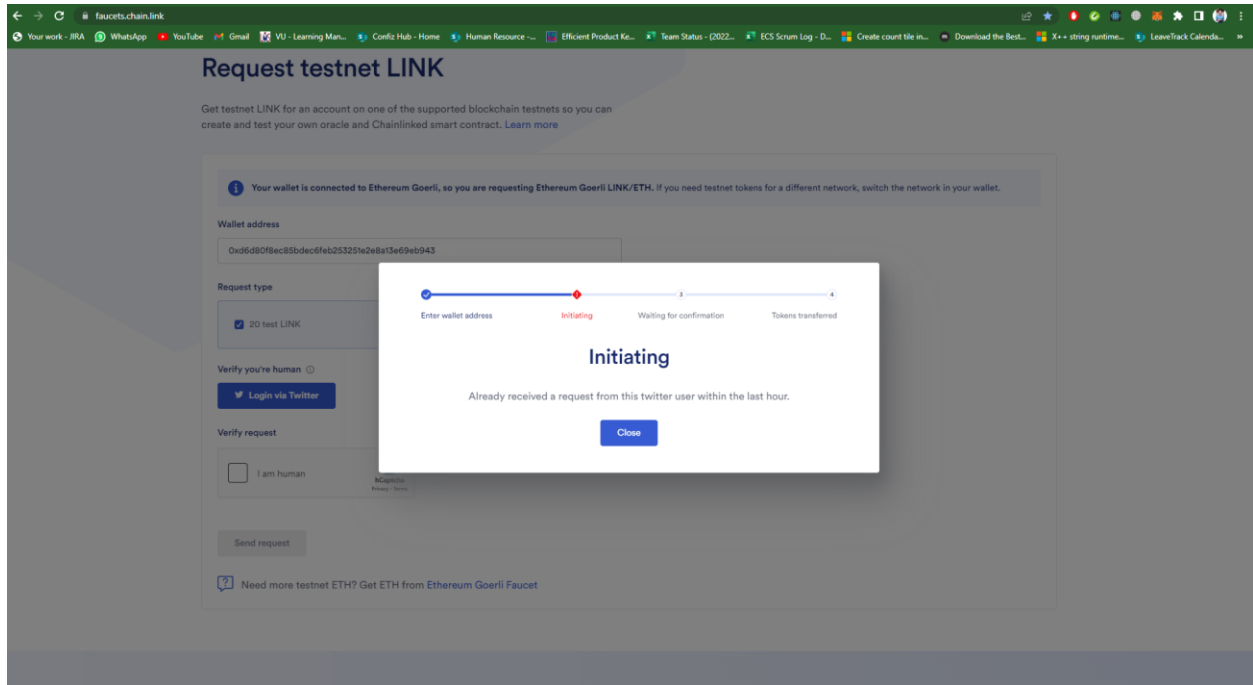d. Then click on Connect to finalize connection to the faucet.
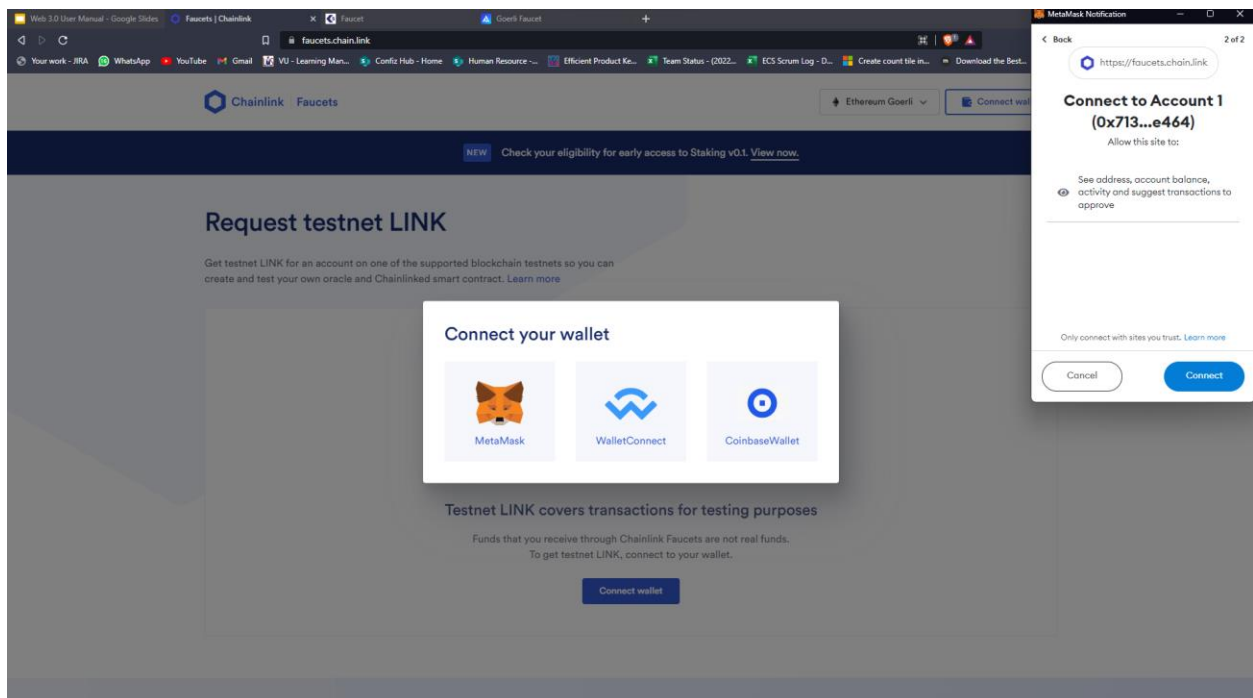
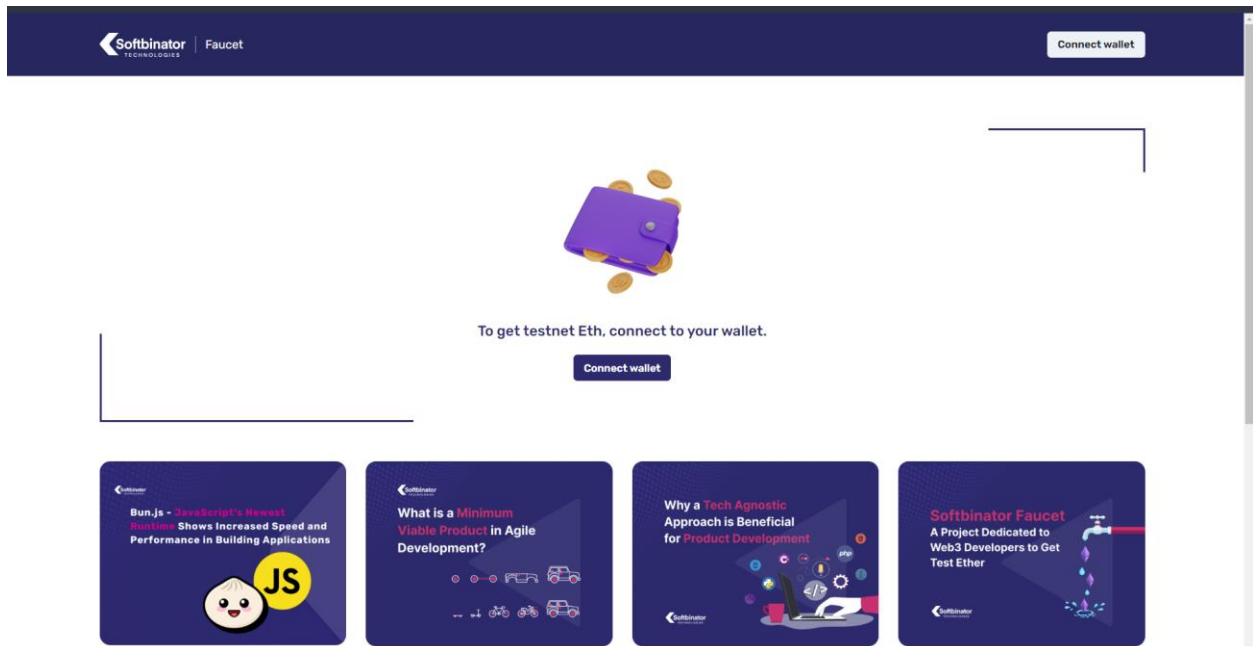e. Copy your wallet address and paste in wallet address field.
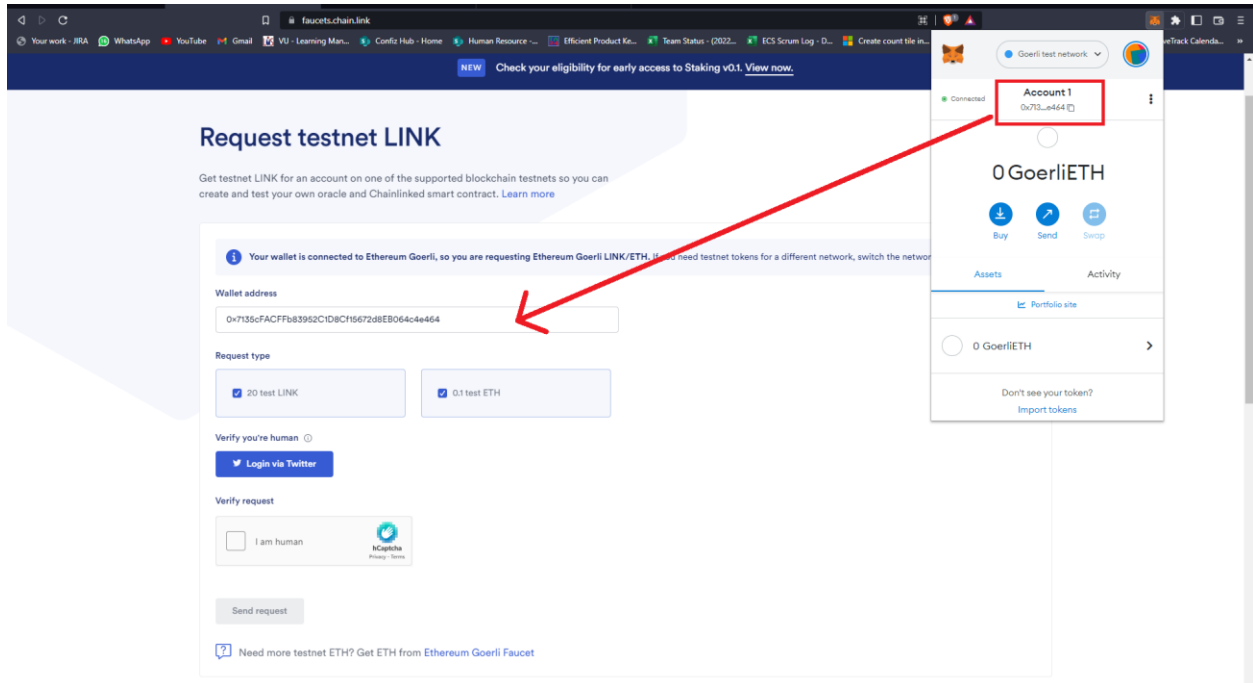
f. Connect your twitter account, complete the captcha and click on Send Request.
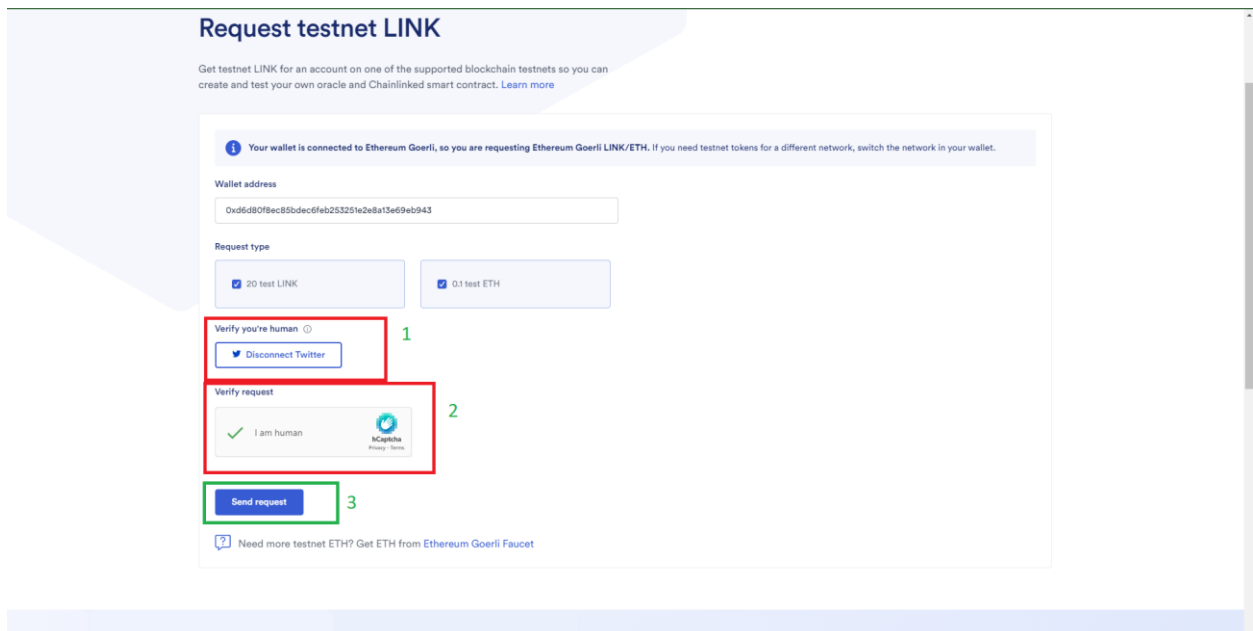
g. Wait for the request to complete and in a short while the GoerliETH tokens will be transferred to your wallet.

2. Now go to faucet.softbinator.com
   a. Click on Connect wallet

b. Select Metamask
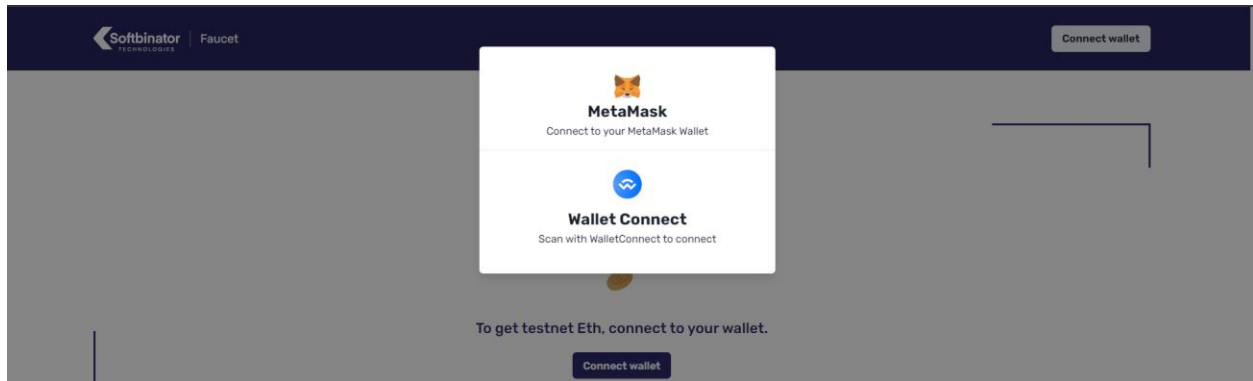
c. Click on next to proceed in the Metamask app to proceed.
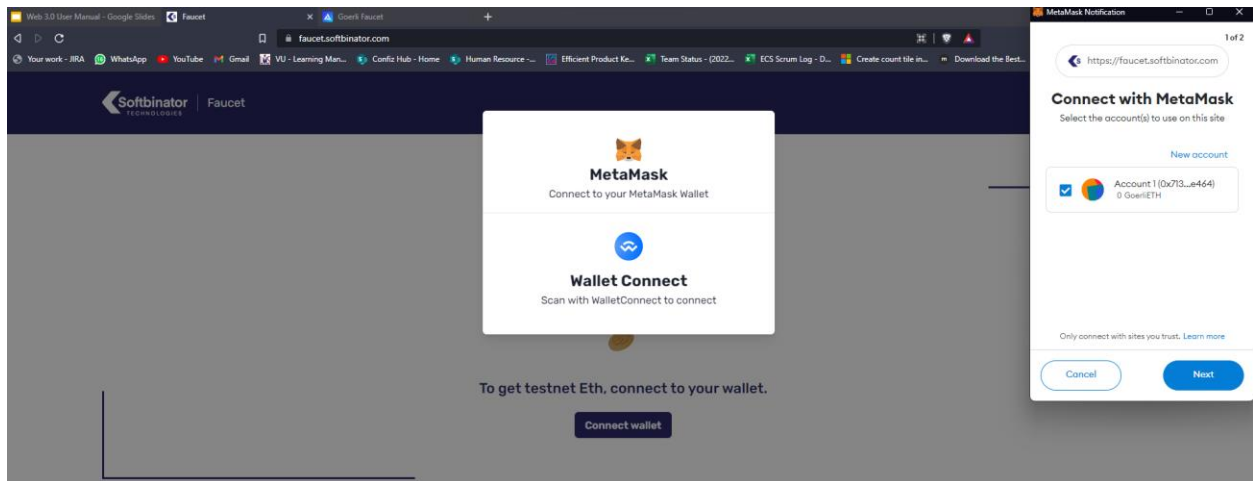
d. Click on Connect to connect your wallet to this testnet site
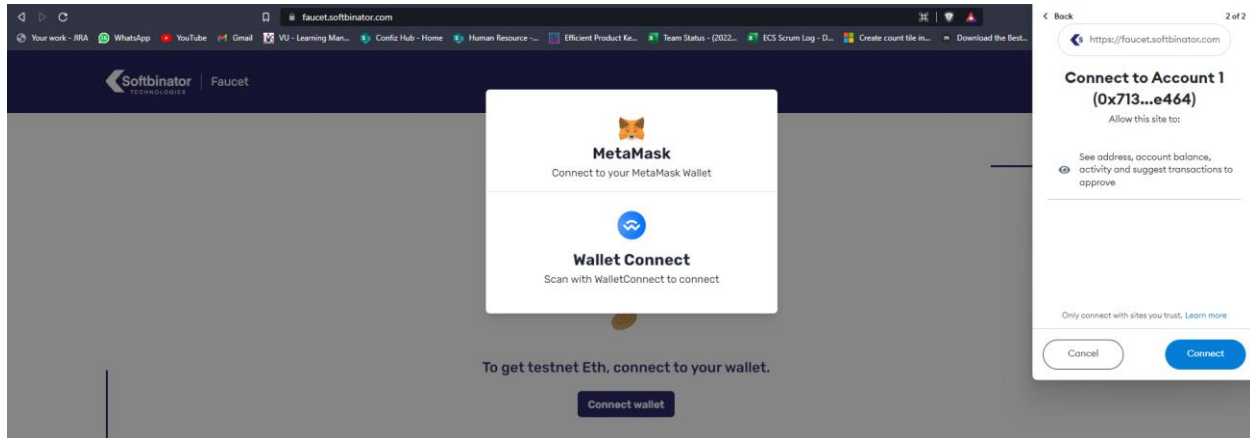
e. Copy your wallet address and paste in wallet address field
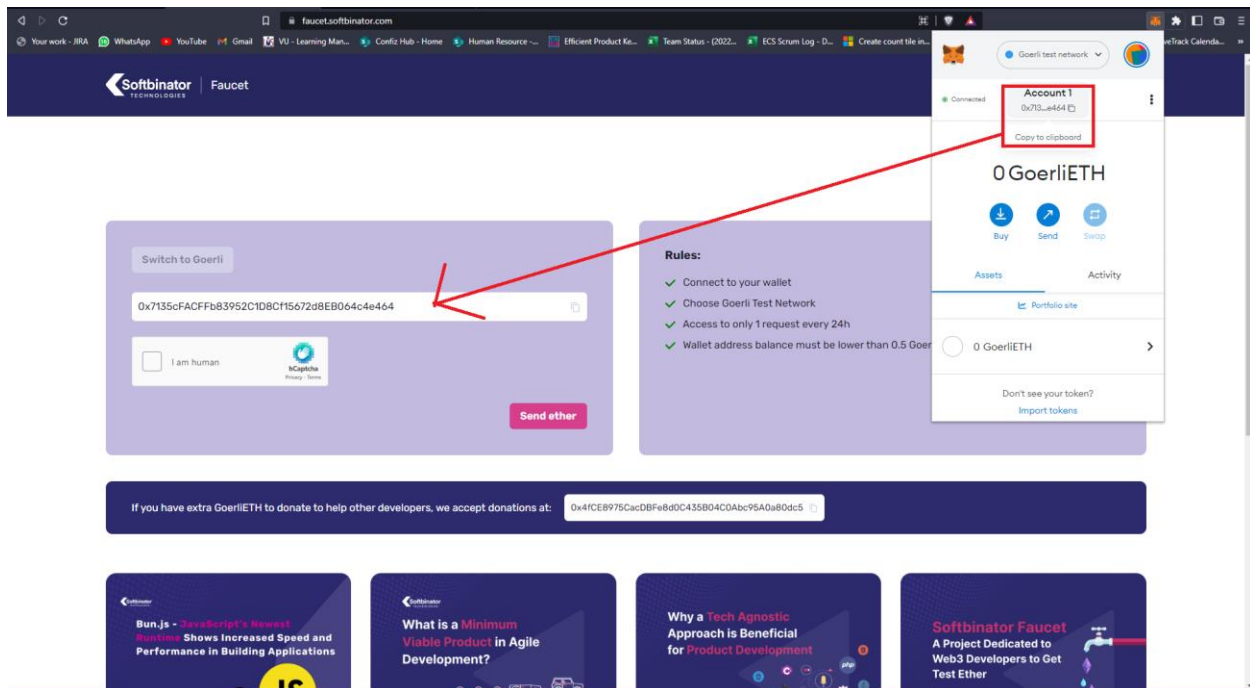
f.   Complete the captcha check and click on Send ether to proceed.

3. Go to goerlifaucet.com

a.   Here you need to sign up on Alchemy to proceed and get GoerliETH tokens.

b. Finish signing up on Alchemy, copy your wallet address and paste in wallet address field and click on Send Me ETH to proceed.
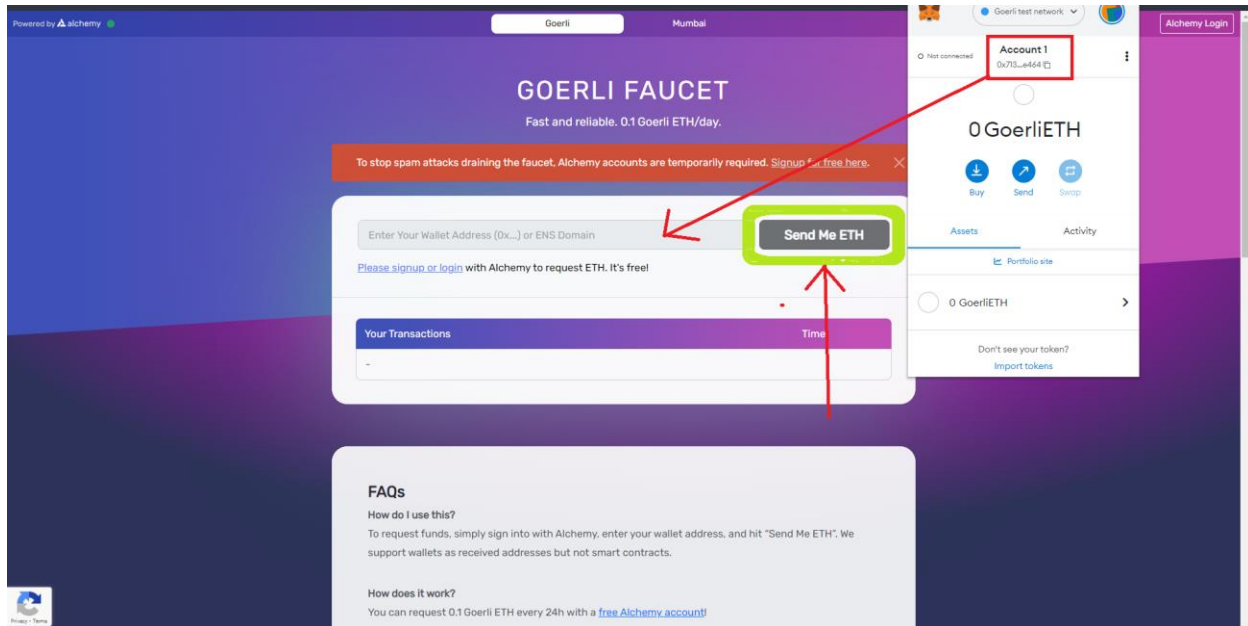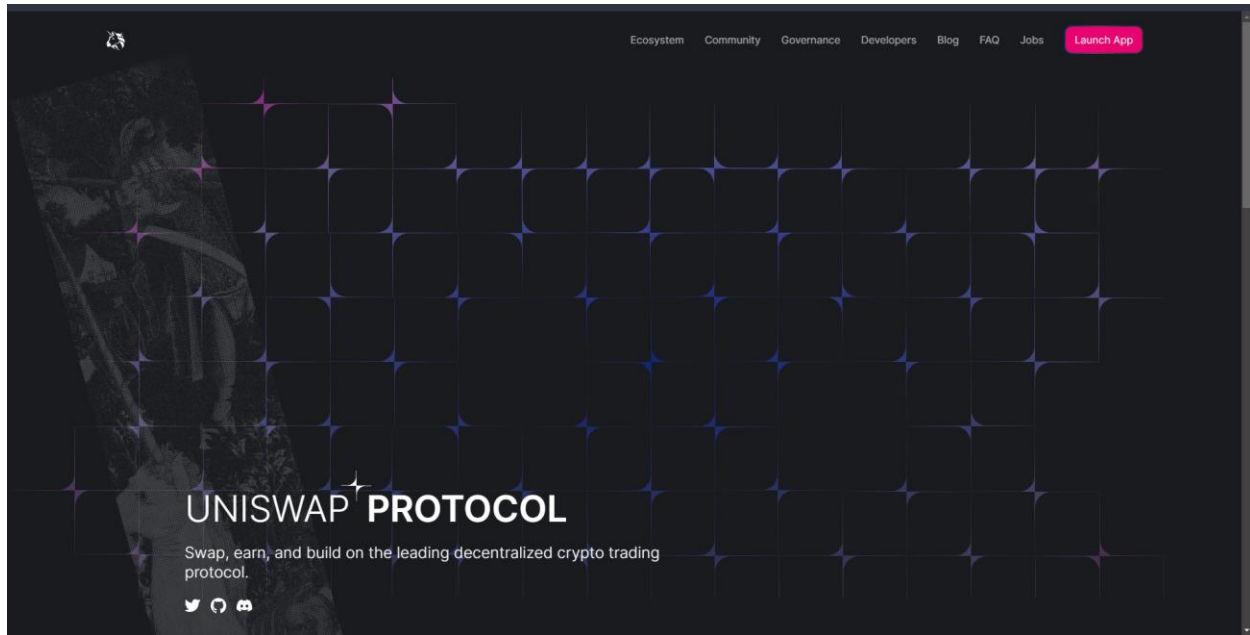

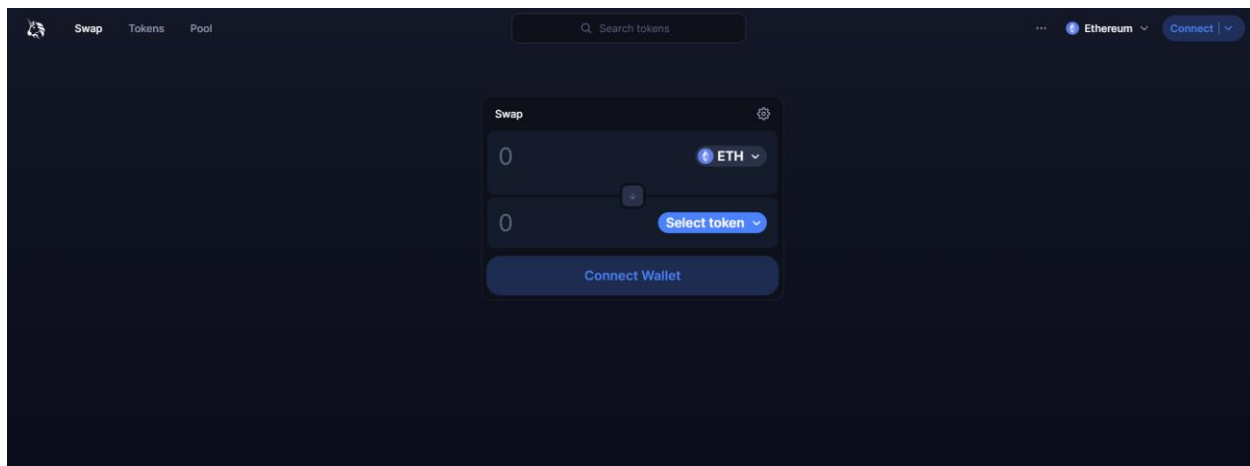Now your wallet balance should look something like this
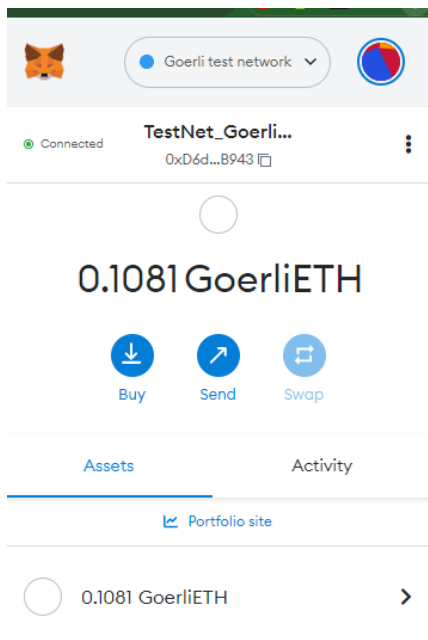
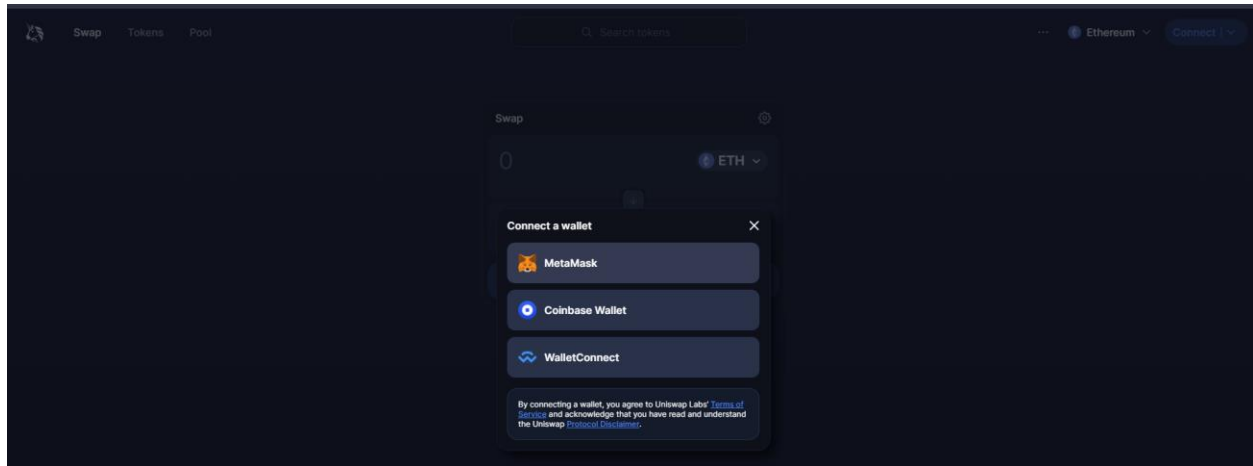Now we head over to Uniswap to try and swap some of our GoerliETH tokens for Uniswap tokens.

4. Go to Uniswap.org.
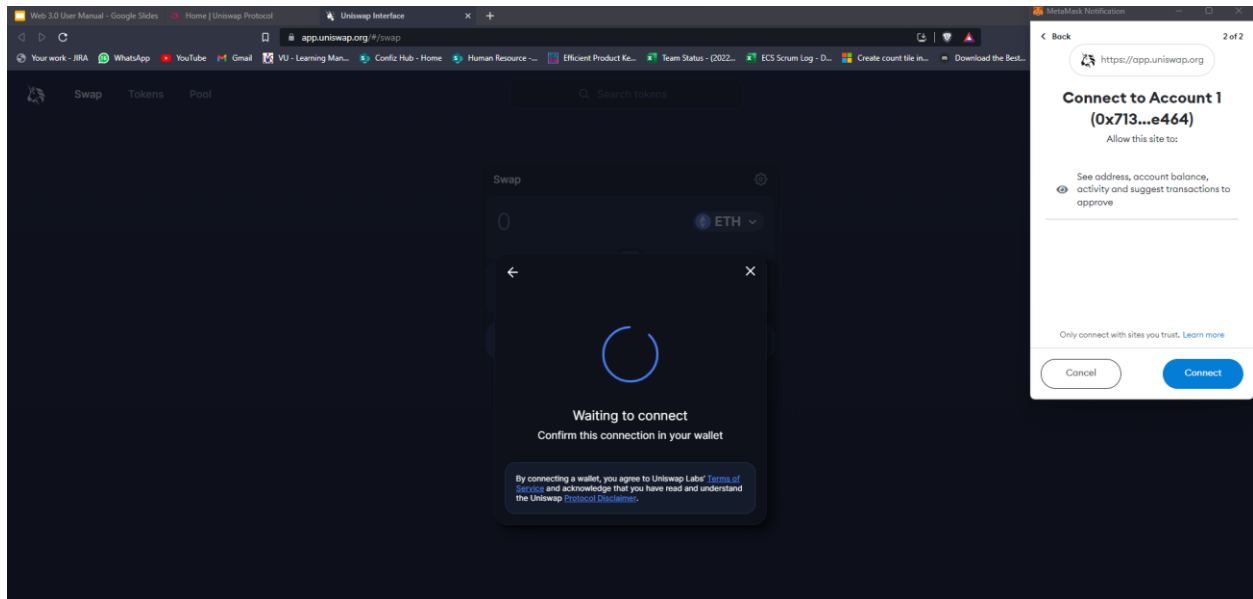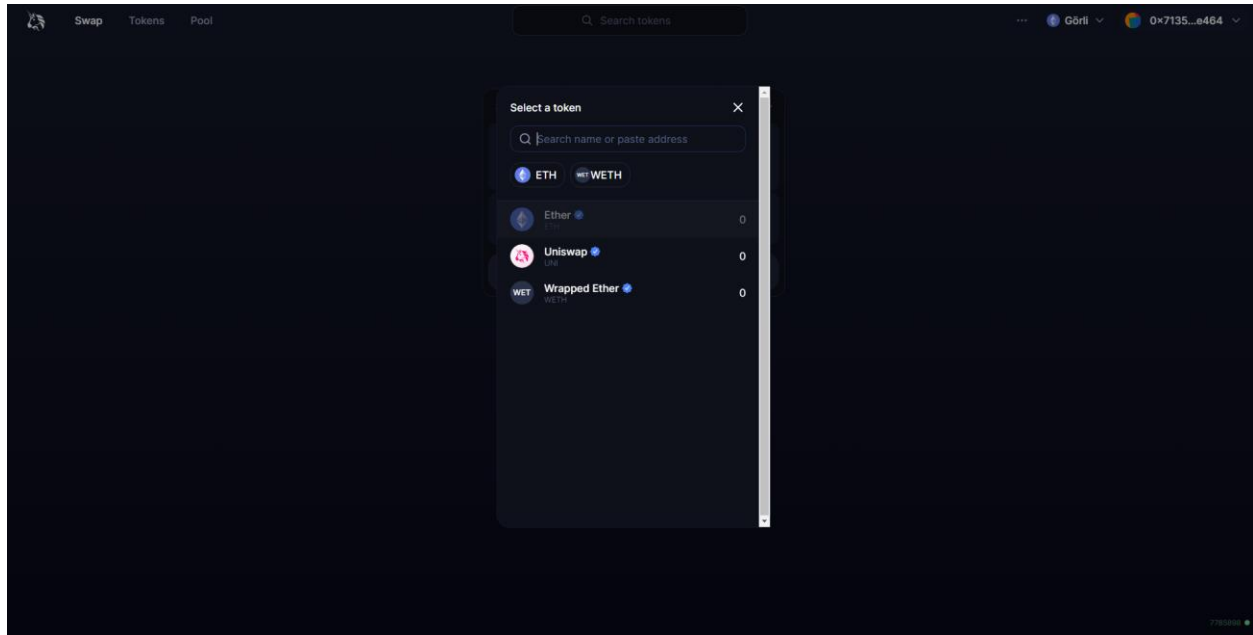   a. Click launch app at top right corner

   b. Click Connect Wallet

c. Select Metamask
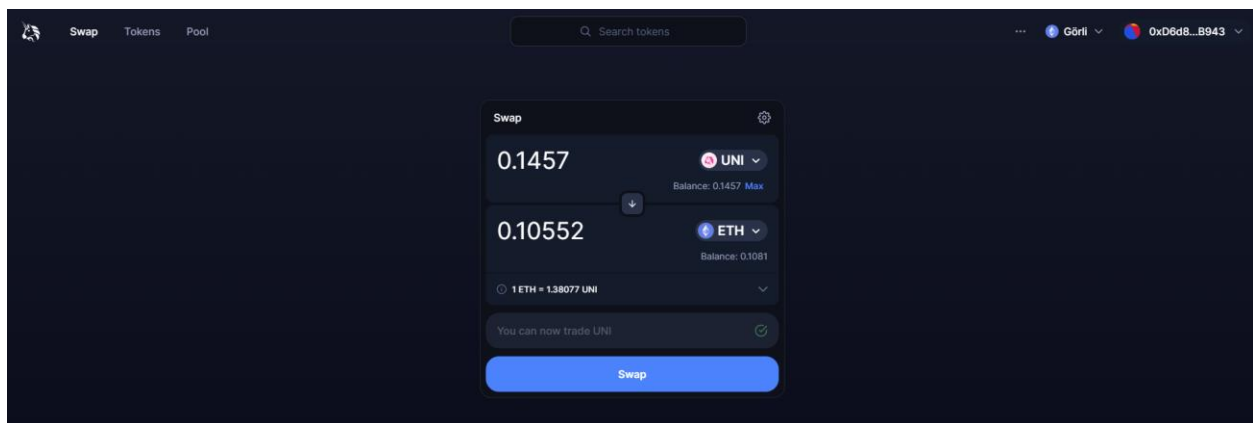

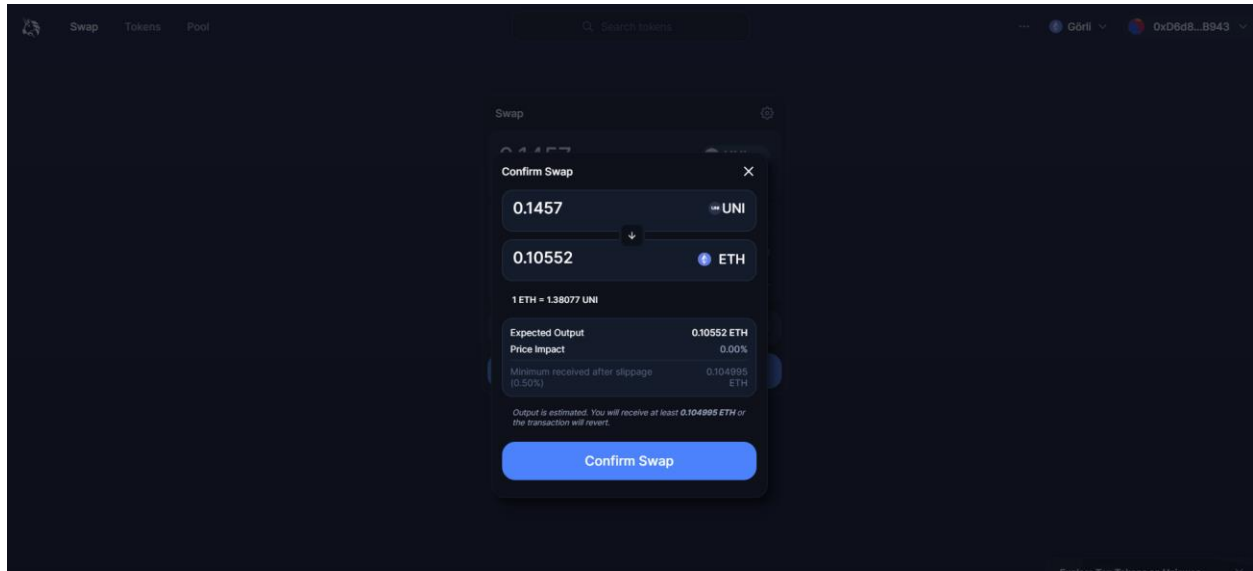d. Click Next and click connect to proceed.

e. Select the desired token you would like to swap with

f. Input how much you would like to exchange with the Uniswap token and click on swap to proceed. In my case I had already swapped my GoerliETH for the Uniswap tokens and needed to swap back to GoerliETH
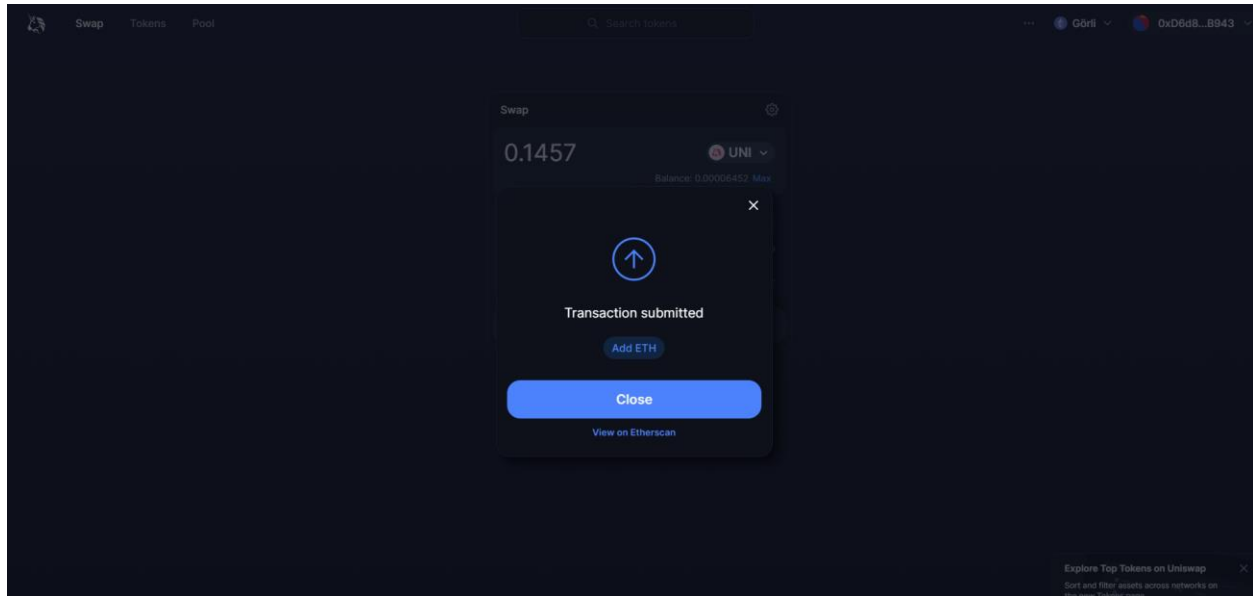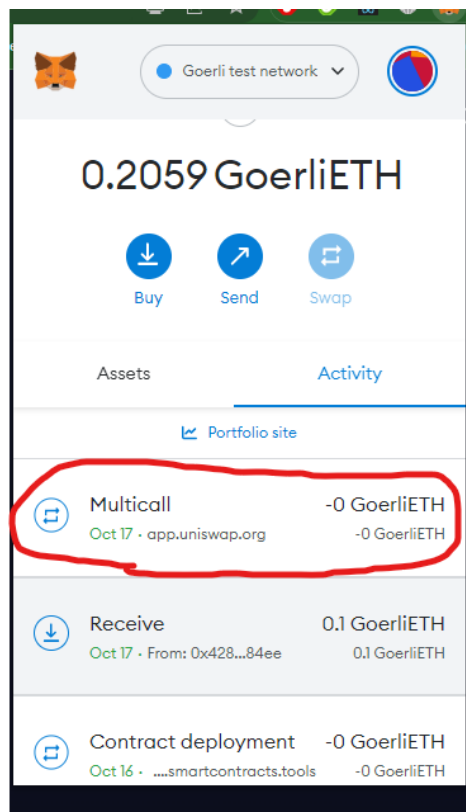
g. Now click on Confirm Swap

h. Click on confirm in Metamask wallet and wait for transaction to complete. You can see the mentioned Estimated Gas fee. Check out my terminology explanation at the top to get an idea what is gas fee?
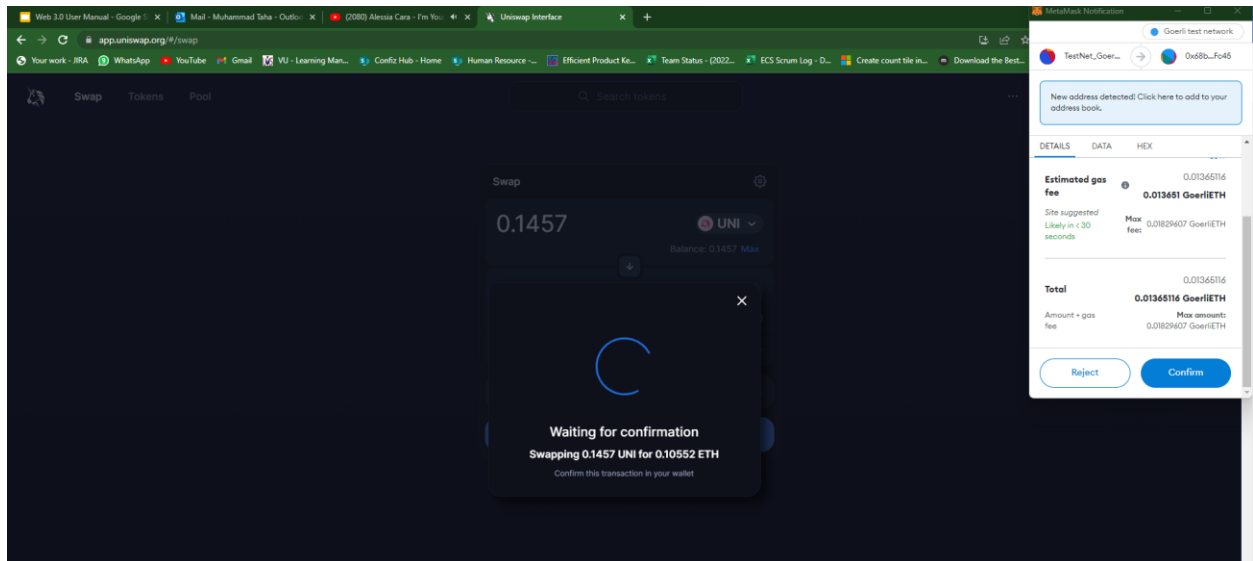
i. Now wait for the transaction to complete.

Once your transactions are processed you can see the activity in your Metamask wallet

Making our own ERC-20 Tokens:

1. Go to https://www.smartcontracts.tools/token-generator/create/ethereum/https://www.smartcontracts.tools/token-generator/create/ethereum/https://www.smartcontracts.tools/token-generator/create/ethereum/

2. Set the following highlighted properties of your own ERC-20 token, pick any name you like, the initial supply then click on agree to terms and conditions and click Next

3. Click on skip on next step

Billing Information
Enter your billing information

Note
Billing information are required only for Main Network. On TEST Network no real payment will be made so you can skip this step.

SKIP

BACK TO TOKEN DETAILS

4. Now review the information before proceeding and then click on Create Token once you're done

Checkout
Double check your information and start your transaction

| Summary	Transaction Cost	
0xd6d80f8ec85bdec6feb253251e2e8a13e69eb943 Tokens will be sent to this address	ⓘ Gas Fee	Variable
SimpleERC20 Token Type	ⓘ Token Deployment	0 ETH
TestToken Name	ⓘ Total	0 ETH
TEST Symbol	CREATE TOKEN	
18 Decimals		
10000000000 Initial Supply		
10000000000 Max Supply		

BACK TO BILLING INFORMATION

5. Click **confirm** to finish the transaction
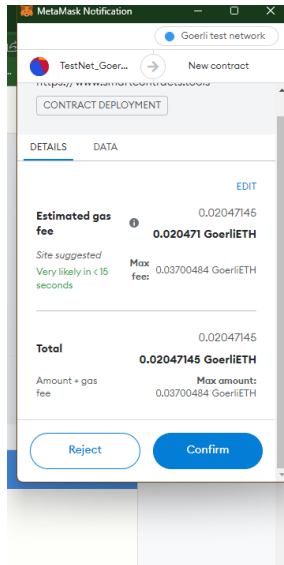
6. Wait for the transaction to complete and then click on Add to Metamask
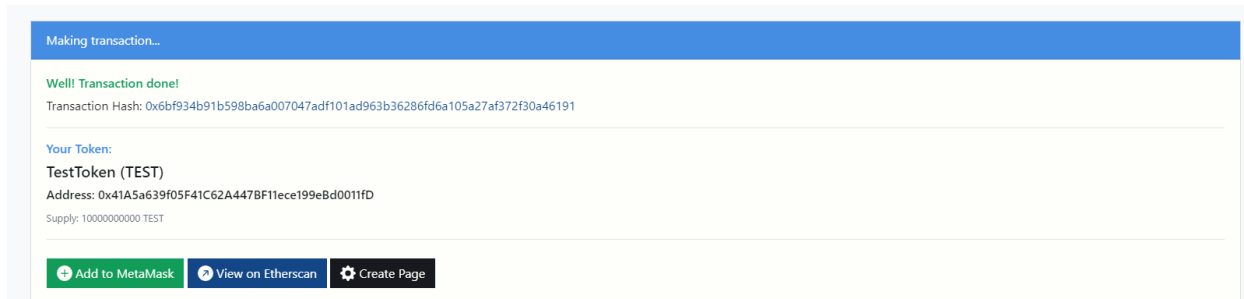
7. Click Add token to import your new ERC-20 token to your Metamask wallet
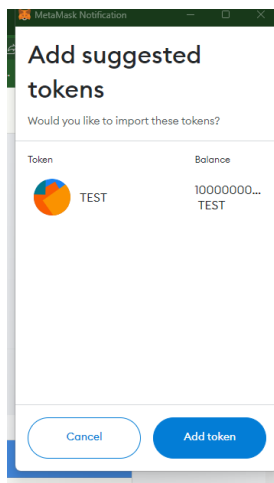
8. Now inside your wallet you can see your newly created ERC-20 tokens