<u>Setup instructions:</u>
Assignment 1 hands on smart contracts

_Find the assigment instructions on the last page_, below are install instructions for Metamask and Cipher.

These are simple setup instructions so that you can use Cryptocurrencies (Ethereum on a Testnet), interact with Smart Contracts, and use Decentralized Applications (dApps) in your web browser and on your phone.

One sentence summary of steps: Use Firefox or Chrome, Install MetaMask (browser plugin), setup a MetaMask account and switch to the Ropsten Testnet, request tokens from a Ropsten Faucet, install the Cipher Browser on your phone and import/recover the account you created with MetaMask.

1. Download and use Chrome or Firefox

2. Install the browser plugin MetaMask:

- Go to https://metamask.io/ and press the **"Get Chrome / Firefox Extension"** link.
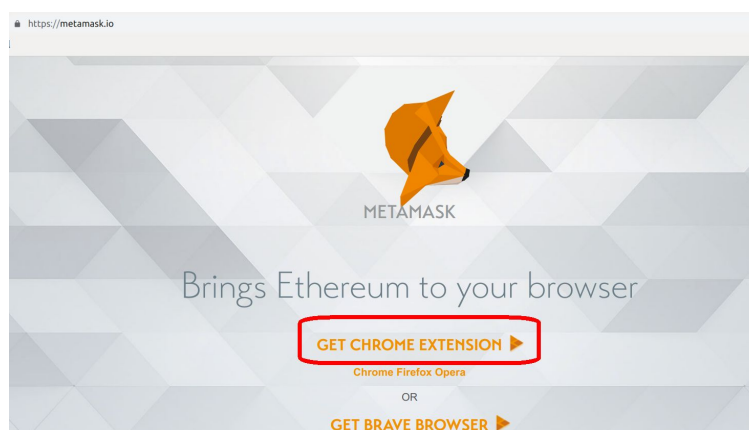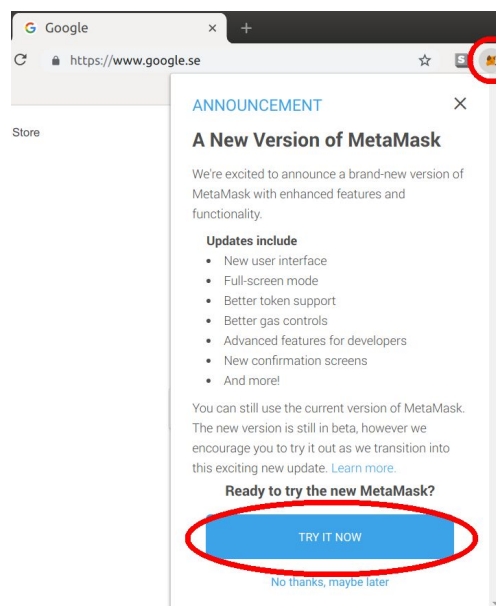
- Then press **"Add to Chrome"** or **"Add to Firefox"**
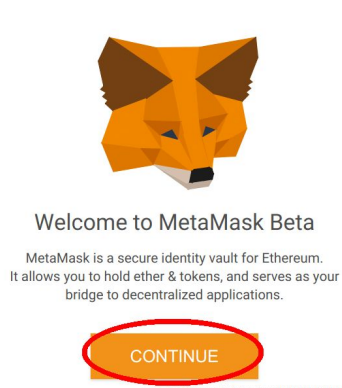

- Install the plugin by pressing **"Add Extension"**

3. Setup MetaMask

- Press the **orange fox** in the right corner (the newly installed MetaMask browser plugin)
- MetaMask will ask you if you want to use the new version. Press **Try It Now**

- A window will appear that says Welcome to MetaMask. Press **Continue**.

- MetaMask will ask you for a Password. This password unlocks the application and shows your private key. Choose a secure password and press **Create**:
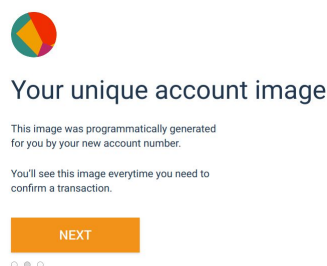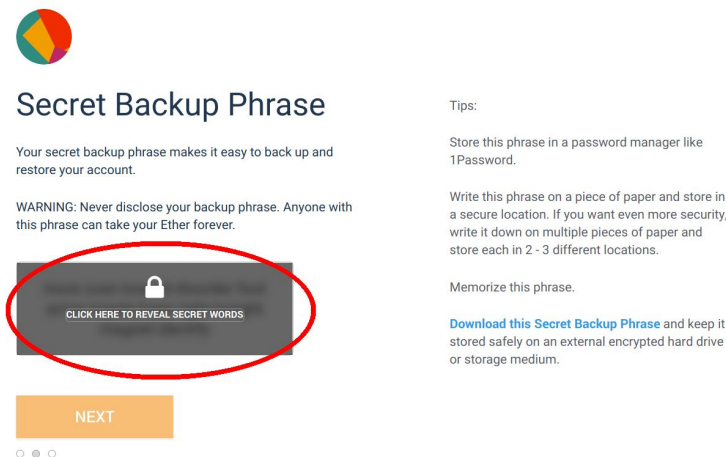

- A unique account image will be generated. Press Next.
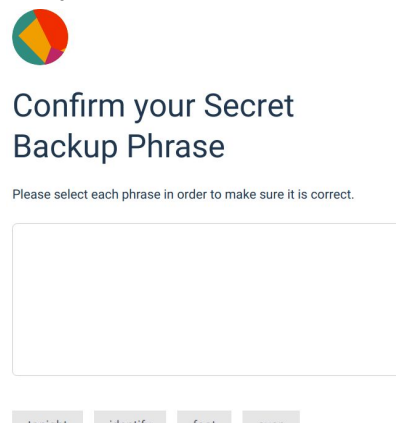

- <u>Accept the three User Agreements</u>: **Terms of Use, Privacy Notice** and **Phising Warning** (note that you need to scroll down to the bottom in order to accept).
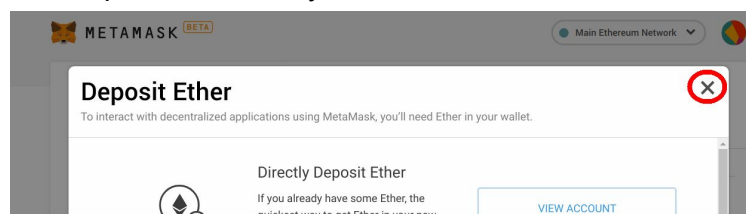
- The next step is ***super important***. Here you will generate your seed phrase that can be used to recover your Private Key and import your account on different devices. Press **Click here to reveal secret words.** *Write down all the words in the correct order* (on your phone, computer or on paper) and store them somewhere safe. You will need the seed phrase in the next step and if you ever lose your account.

Secret Backup Phrase

Your secret backup phrase makes it easy to back up and restore your account.

WARNING: Never disclose your backup phrase. Anyone with this phrase can take your Ether forever.

🔒

CLICK HERE TO REVEAL SECRET WORDS

NEXT

Tips:

Store this phrase in a password manager like 1Password.

Write this phrase on a piece of paper and store in a secure location. If you want even more security, write it down on multiple pieces of paper and store each in 2 - 3 different locations.

Memorize this phrase.

Download this Secret Backup Phrase and keep it stored safely on an external encrypted hard drive or storage medium.

- In the next step: Confirm your seed phrase by pressing the word blocks (in order). This is to make sure that you actually wrote it down and can remember it.

Confirm your Secret Backup Phrase

Please select each phrase in order to make sure it is correct.

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- Congratulations! You have now setup your MetaMask account. Close the popup Window that asks you to deposit Ether into your account

METAMASK BETA   ● Main Ethereum Network ⌄

Deposit Ether   ✕
To interact with decentralized applications using MetaMask, you'll need Ether in your wallet.

Directly Deposit Ether

If you already have some Ether, the quickest way to get Ether in your new   VIEW ACCOUNT

- Next: Change your network in the top right corner from the Main Ethereum Network to the **Ropsten Test Network**. We will use a TestNet to try smart contracts and send money without using real money.
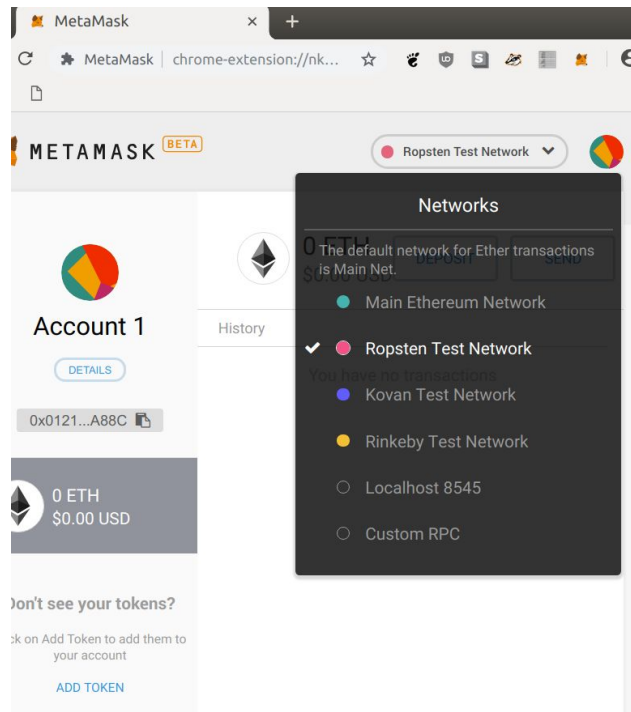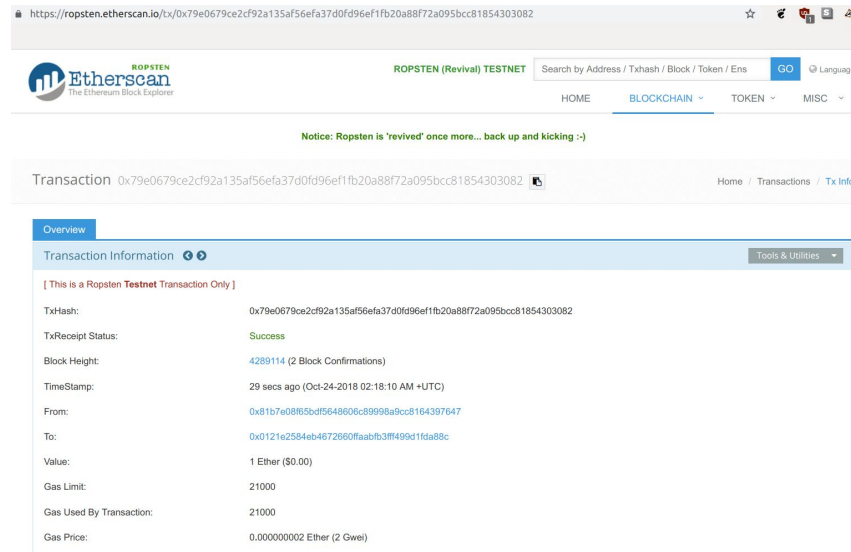

4. Get some test Cryptocurrency to your account

Now it's time to get some cryptocurrency into your account. Since we are using a test network we can request Ether from a so called faucets. A Ropsten faucet hosted by MetaMask is located on this website https://faucet.metamask.io/

If everything is setup correctly you just need to press **request 1 ether from faucet.**
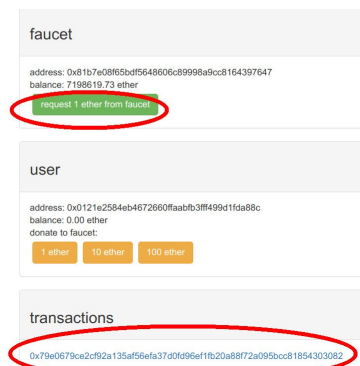
After that a link to your transaction will be shown at the bottom of the page. You can press it, and inspect the transaction on Etherscan (includes information about sender, receiver, block # etc.)

ALTERNATIVE FAUCET

There are many other faucets you can try to get test ether. One alternative is to copy your Wallet Public Address, by pressing the **orange fox** and then pressing your account name (default Account 1). Then go to https://faucet.ropsten.be/ and *paste* your public testnet account address in the field and press **Send me test Ether**.

After the block has confirmed (it takes one min) you will have 1 ether in your account! Unfortunately it's not real US Dollars.
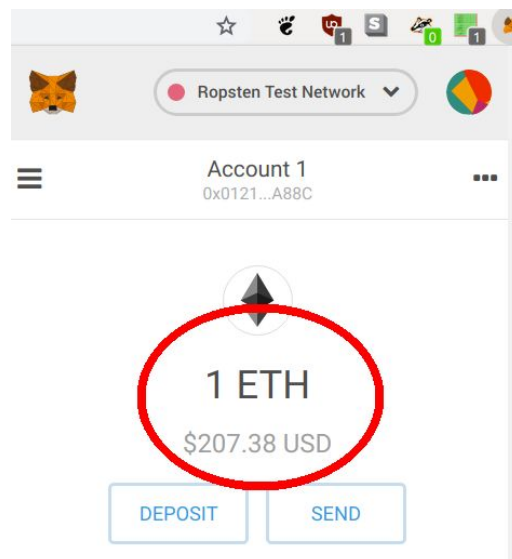

Set up a mobile crypto wallet and dApp browser

There are many crypto wallets and dApp / smart contract browsers. I recommend Cipher Browser (or Trust browser). Cipher is developed by Coinbase and the one we will look at in this tutorial, because it supports TestNets.

In order to install Cipher go to their website https://www.cipherbrowser.com/ and install it either for iOS or Android (or search for it in the App Store / Google Play).
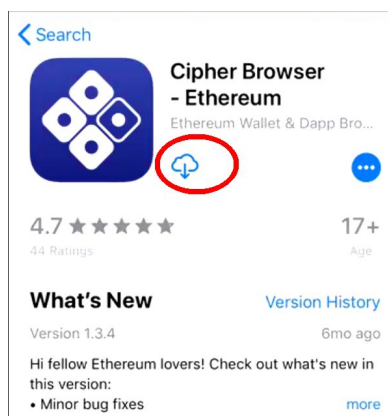
When you have installed the app you want to import your wallet from MetaMask in to Cipher. In order to do that you open the app and then choose **Restore an Existing Wallet**
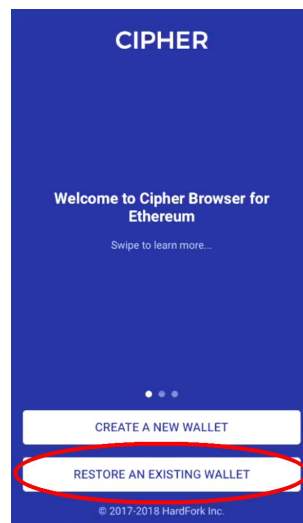

- After that **Agree** to the terms of condition.

- Then you need to put in your 12 <u>seed phrase</u> words that we saved when we setup the MetaMask account.
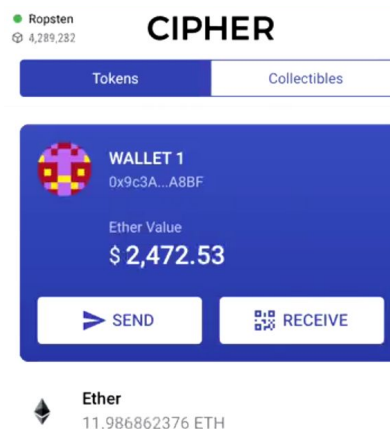

- Press **Confirm** (and enable Touch ID if you want)

- Congrats! Cipher is setup. Now we need to change from the Mainnet to the Ropsten Testnet. You can do that by pressing the **Settings cogwheel at the bottom right, and then pressing Network:**
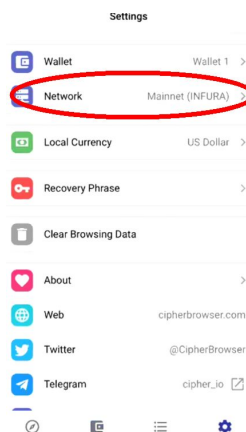
- Change to **Ropsten Testnet.**
- You should now see all Ethers that you have received from faucets in the account
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Congratulations! Now you can send and receive Ether as well as interact with Smart Contracts, Decentralized Applications, and browse Web3.0 both on your computer and your mobile phone!

Assignment Lecture 1: L2L Blockchain

Interact with a smart contract

1. Install Metamask or Cipher or both
2. Get some Ropsten test ether from a Faucet
3. Direct your web3 browser to: bit.ly/afo-smart-contract
4. Create a new proposal and the *proposal text should only be your first name.*
5. Save the proposal and confirm the transaction
6. Find the proposal and vote "Approve"

PS. I'll check that the proposals were submitted from unique Ropsten addresses ;)