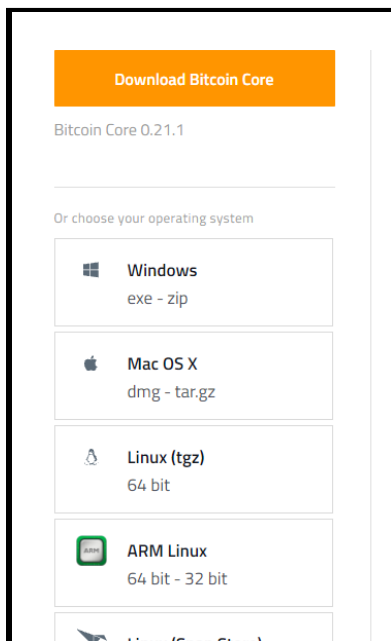
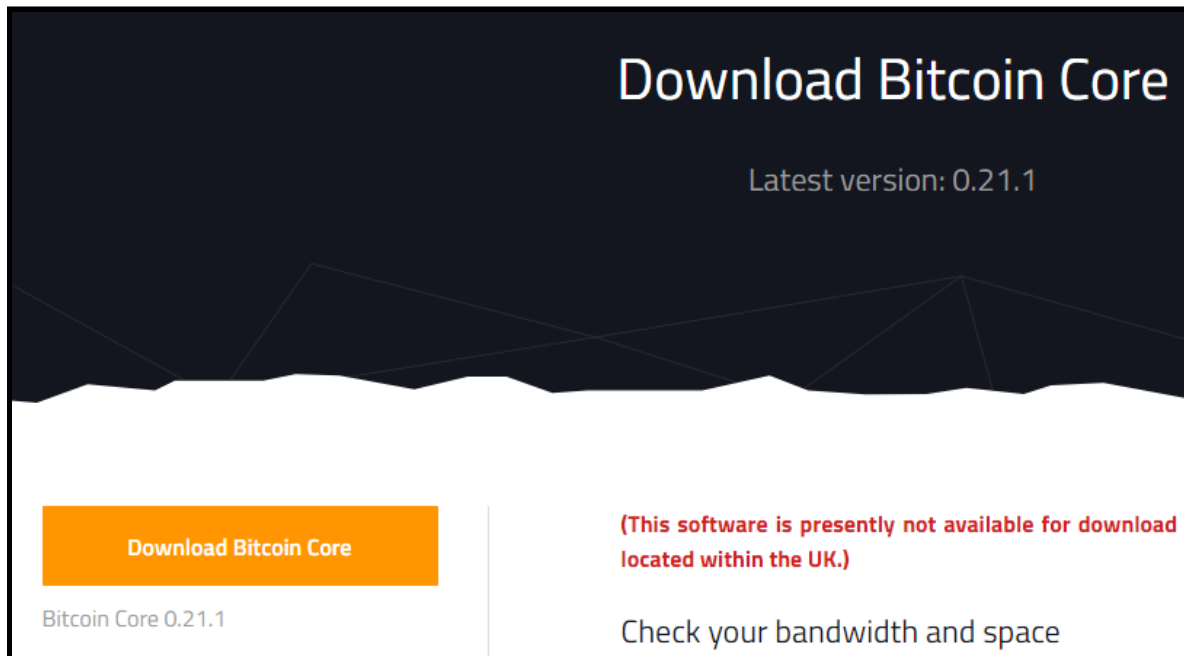


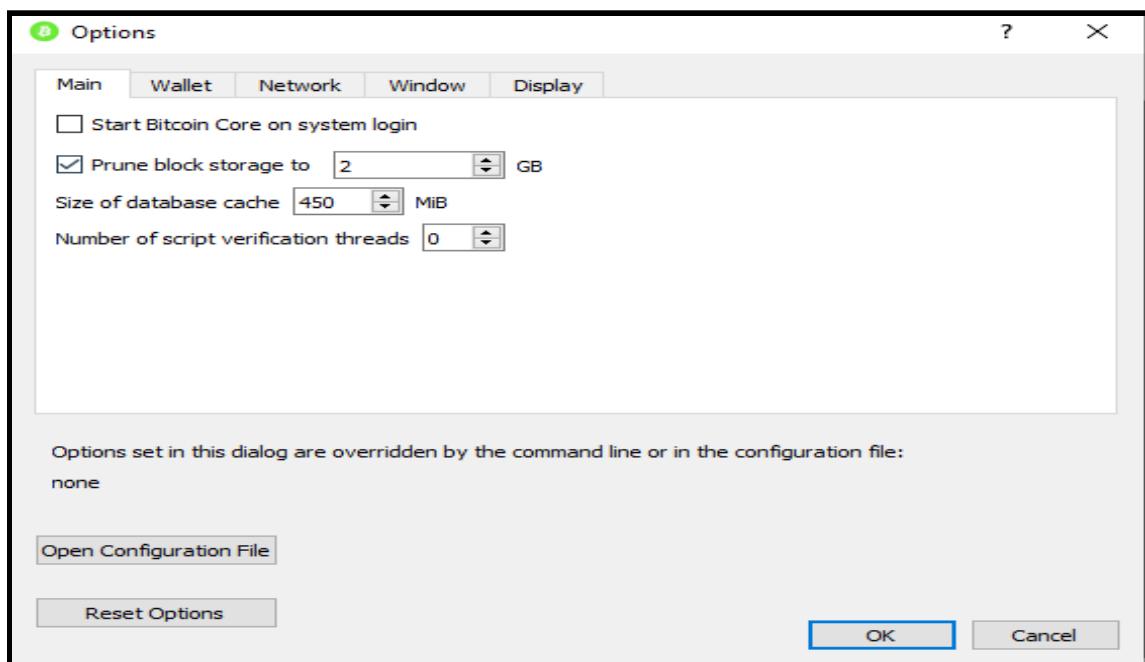
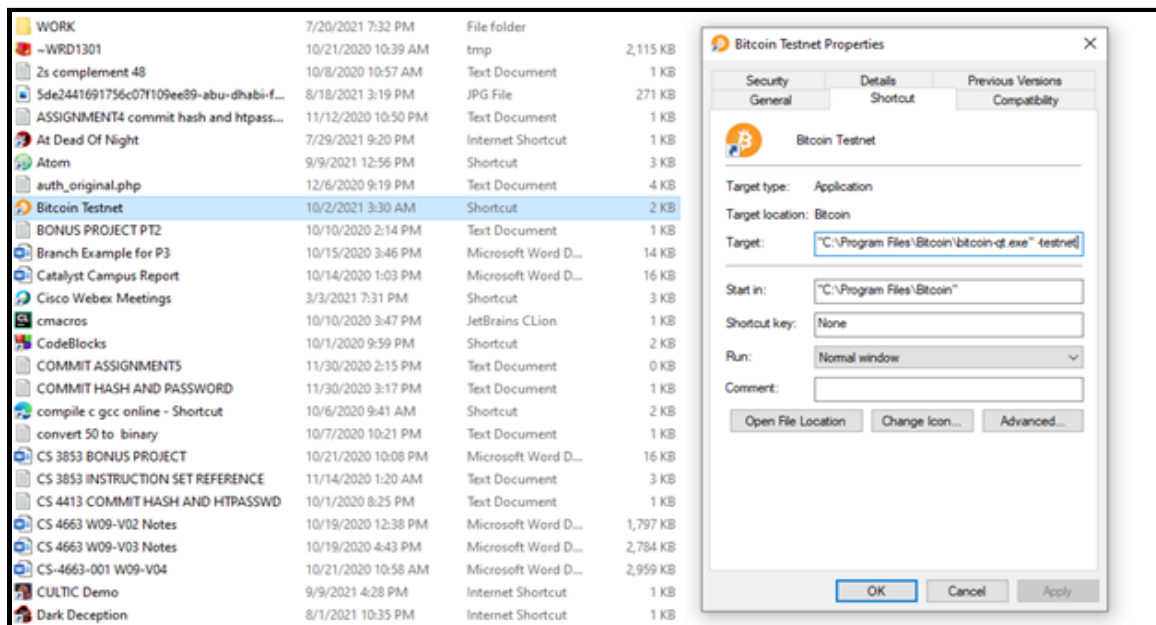
Eric Huddleston, hpg103
Jorge E. Flores, gco762
CS4473-001
Dr. Murtuza Jadliwala

Lab 1

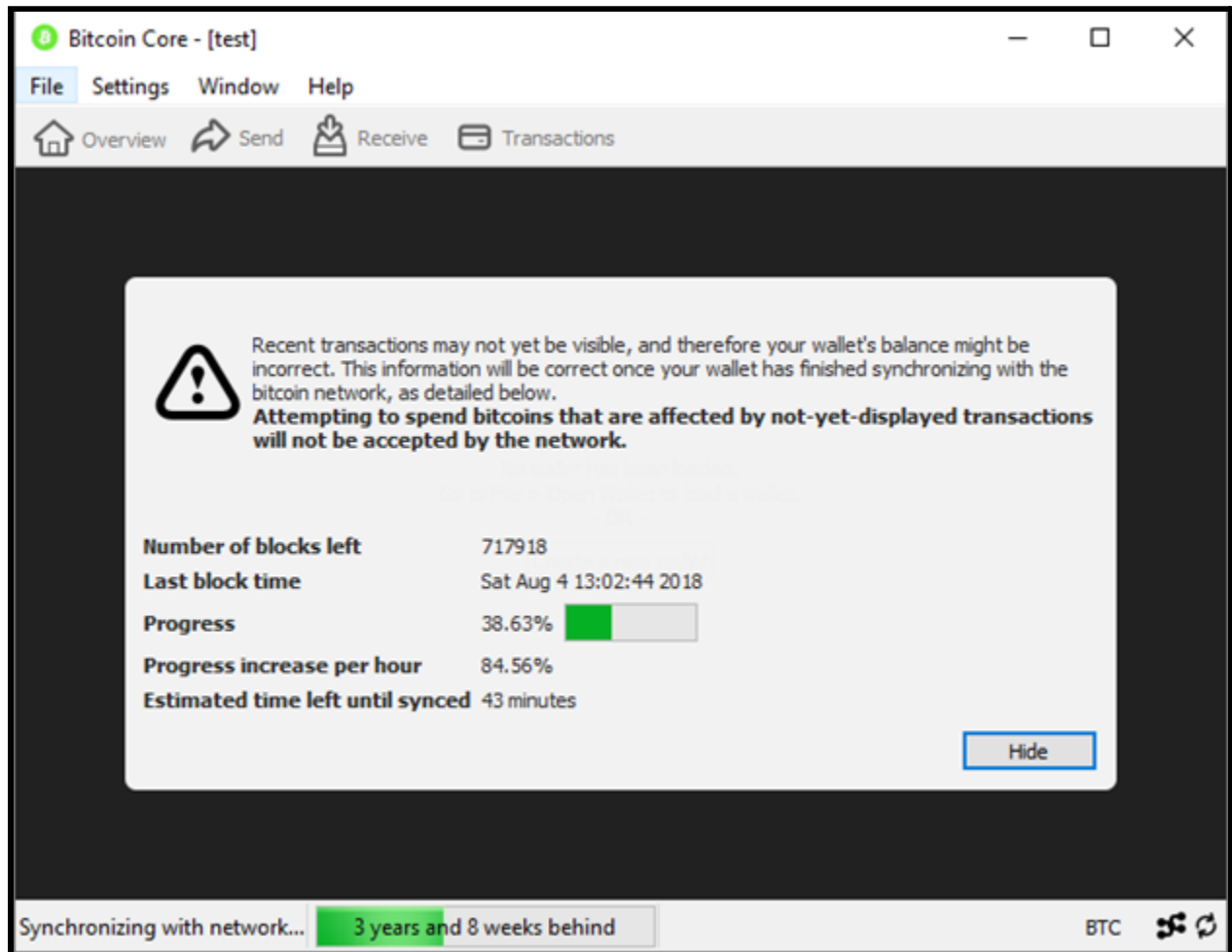
The first step to completing this lab was to download the actual bitcoin core as instructed. This was just a simple matter of traveling to the bitcoin.org website and hitting download. I specifically made sure to download the Bitcoin core application itself by clicking the orange link 'Download Bitcoin Core'. This step was simple and straightforward, only taking a few minutes.



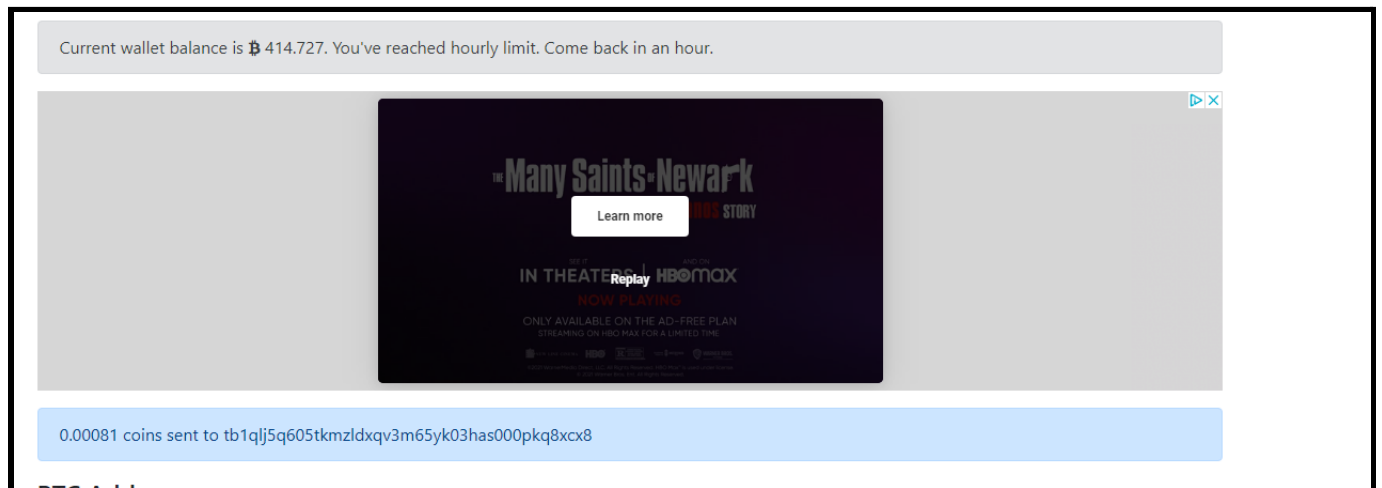
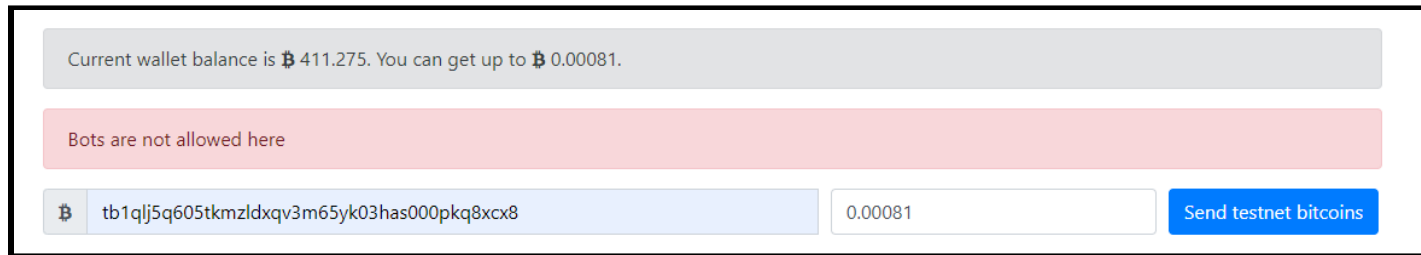
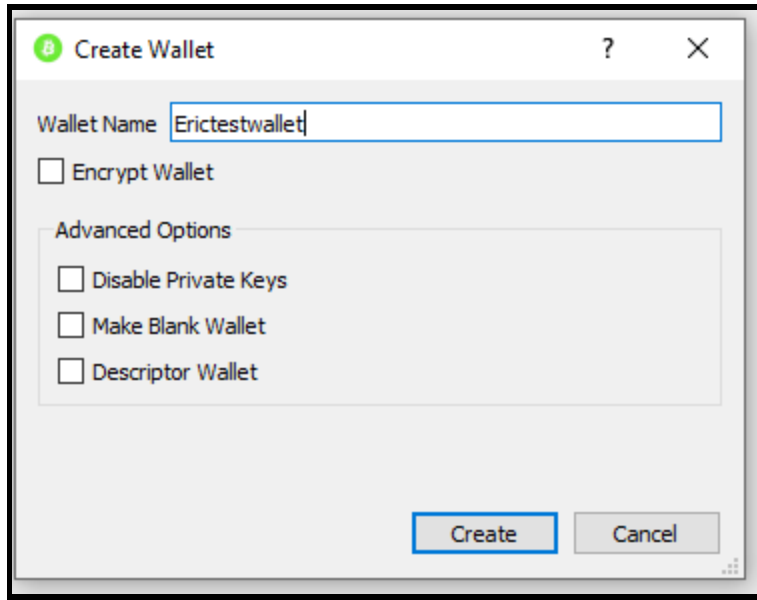
Once the application was downloaded the setup wizard started running and assisted with some of the final steps. However I did not select the option to start the Bitcoin client application after installation finished. I instead navigated to the path of Bitcoin core client C:/Program Files/Bitcoin and right clicked and selected “create shortcut”, where the shortcut was placed on the Desktop. Then I navigated to the desktop and renamed the shortcut “Bitcoin Testnet”. Then I right clicked again and selected the “Properties” option and under “target” added the -testnet flag to the end of the path, as shown below. After that I launched the shortcut and the Bitcoin core client proceeded to launch in the testnet mode as expected. In the next step, I navigated to ‘Settings’ → ‘Options’, and selected the prune option as shown in the second screenshot.



The pruned blockchain on my machine (Eric) took approximately 3 hours to download, as seen in the screenshot below. Additionally, the last block time appears to have gone from 2013 to the current date.



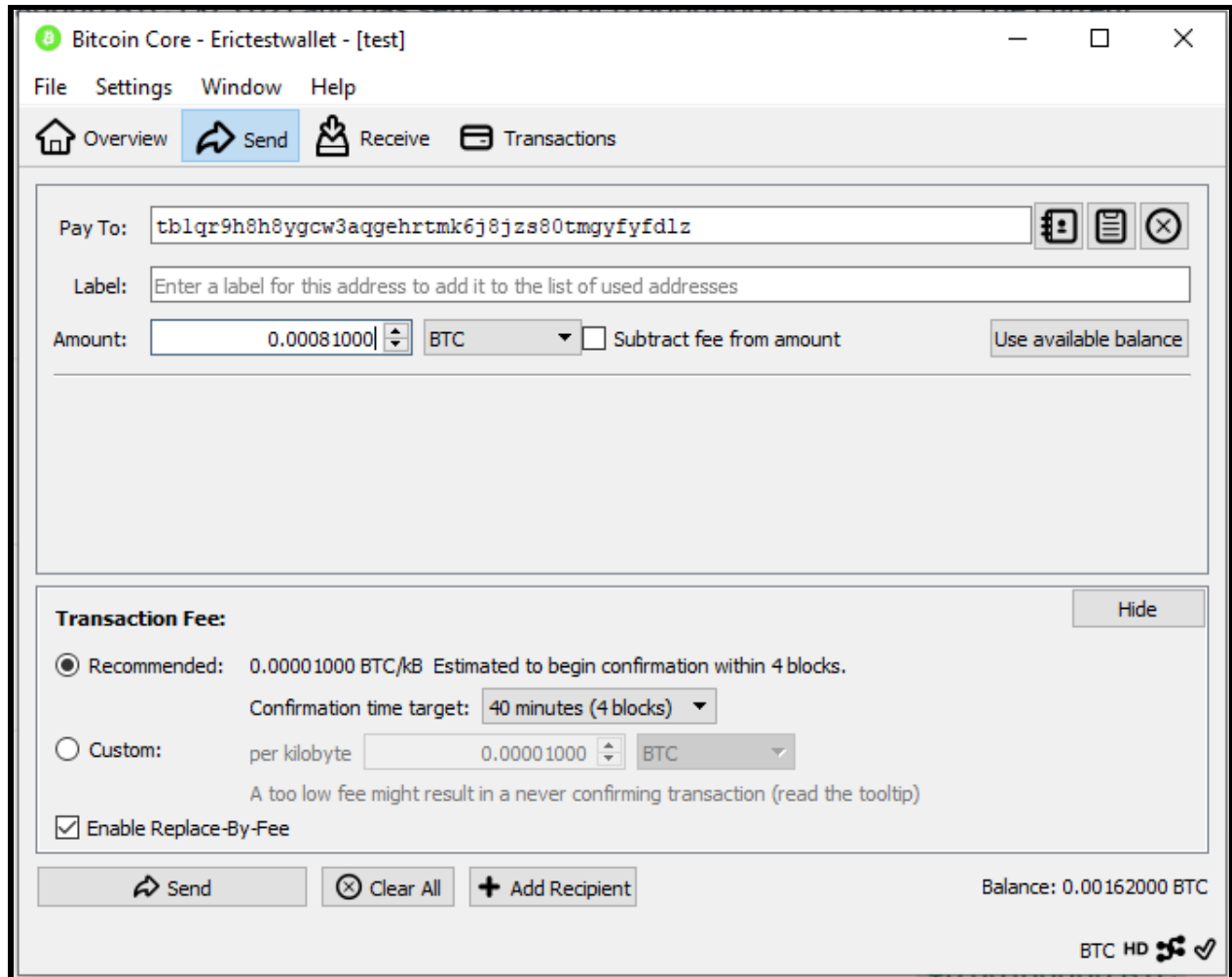
The next step was to create a wallet, as seen in the below screenshot. Then we proceeded to retrieve some Testnet Bitcoins, by navigating to <https://bitcoina faucet.uo1.net/send.php>. Once on the website, the address of the wallet was entered and 0.00081 BTC was requested from the faucet and received the testnet bitcoins on the core client, as in the second screenshot below.



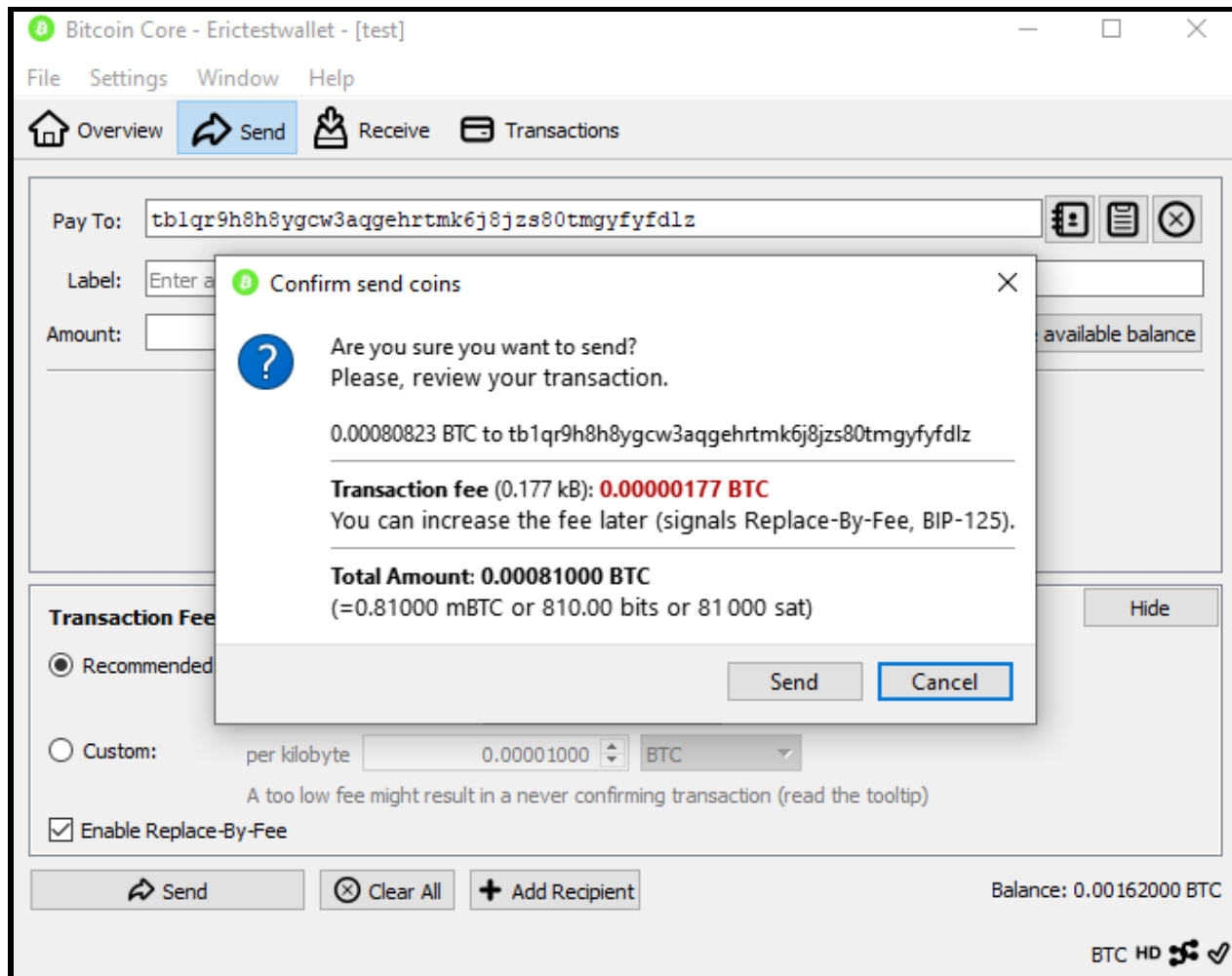
About an hour later I requested the same amount, 0.00081 BTC, from the same faucet, so the total came out to 0.0016200 BTC. The next step was to send the newly obtained testnet bitcoins to the instructor from the address of my wallet (Eric), which is shown in the below screenshot.



Moreover, as you can see from this screenshot, the name of my wallet is 'Erictestwallet' and its address is 'tb1qaskdq9umc8fdmmc7nals0a5986lnmtssqnqnvk'. After that 0.00081 bitcoin were sent to the instructor's address as shown below:



As soon as the transaction was completed, a confirmation of the transaction was displayed on screen, as shown below:

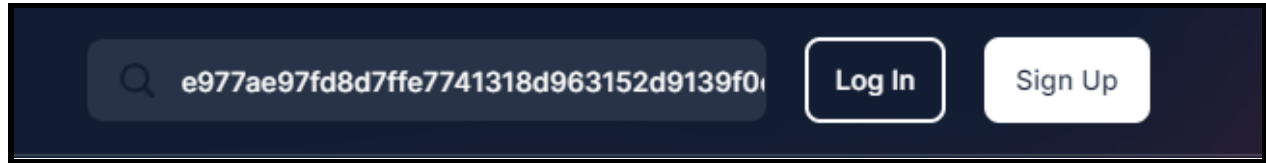


Furthermore the new balance of the wallet and the details of the transaction were reflected in the Core client as shown below:

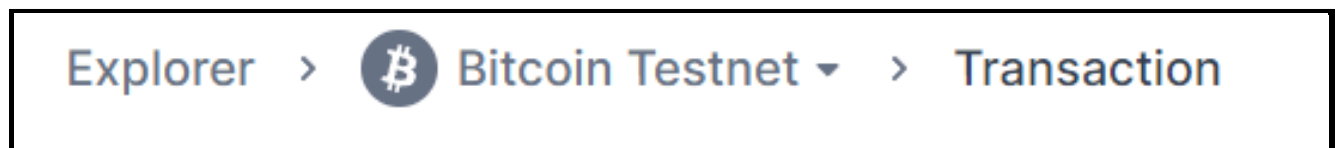
Balances		Recent transactions		
Available:	0.00081000 BTC		10/3/2021 18:49	-0.00081000 BTC
Pending:	0.00000000 BTC		(tb1qr9h8h8ygcw3aqgehrmk6j8jzs80tmgyfyfdlz)	
Total:	0.00081000 BTC		10/3/2021 15:30	+0.00081000 BTC
			(tb1qlj5q605tkmzldxqv3m65yk03has000pkq8xcx8)	

✓	10/3/2021 18:49	Sent to	(tb1qr9h8h8ygcw3aqgehrmk6j8jzs80t...	-0.00081000
✓	10/3/2021 15:30	Received with	(tb1qlj5q605tkmzldxqv3m65yk03has0...	0.00081000

The next step was to track the transaction on 'blockchain.com'. First we searched the transaction ID, as show below:



After searching for the transaction using its ID, we were greeted with information about the transaction such as the hash and the number of confirmations. Every day about once a day we would log in and search up the transaction and check the number of confirmations, which is shown below. Once the transaction reached the common heuristic of 6 transactions, we knew we were done. As of the day of the transaction, 10/03/21, there have been a total of 1,155 confirmations done to it.



Hash	e977ae97fd8d7ffe7741318d963152d9139f0e44ba3b178bb00a2b143f623798
Status	Confirmed
Received Time	2021-10-03 18:49
Size	339 bytes
Weight	708
Included in Block	2097556
Confirmations	1,155
Total Input	0.00081000 BTC
Total Output	0.00080823 BTC
Fees	0.00000177 BTC
Fee per byte	0.522 sat/B

Summary ⓘ

USD **BTC**

Fee	0.00000177 BTC (0.522 sat/B - 0.250 sat/WU - 339 bytes) (1.000 sat/vByte - 177 virtual bytes)	0.00080823 BTC
Hash	e977ae97fd8d7ffe7741318d963152d9139f0e44ba3b178bb00a2b14... ⓘ	2021-10-03 18:49
	tb1qaskdq9umc8fdmmc7nals0a5986lnmtssqngnvk 0.00050000 BTC ⓘ➡	tb1qr9h8h8ygcw3aqgehrtmk6j8jzs80tmgyfydlz 0.00080823 BTC ⓘ
	tb1qdqgc03qft5uqpt5780awv3v4hmdsm7vd25xcpj 0.00031000 BTC ⓘ	

This transaction was first broadcast to the Bitcoin network on October 03, 2021 at 6:49 PM CDT. The transaction currently has 1,155 confirmations on the network. At the time of this transaction, 0.00080823 BTC was sent with a value of \$38.98. The current value of this transaction is now \$45.89. Learn more about [how transactions work](#).



Collaborations:

Part 1 of the lab, downloading and installing the Bitcoin core client was done by me, Eric Huddleston. I also helped in creating the wallet, receiving the testnet Bitcoins, and sending the transaction to the instructor. Jorge helped by tracking the transaction on blockchain.com and confirming that the transaction had reached the 6 confirmation heuristic. Additionally we both helped write the lab report, but I (Eric) helped write the parts of the report relevant to Part 1 of the lab and receiving and sending testnet Bitcoins in part 2. Jorge helped in writing the parts of the report relevant to the remainder of part 2 of the lab (tracking the transaction on blockchain), as well as the organization of the screenshots and the proofreading and coherence of the report itself.