ARKHAM

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Take Home: Displaying Ethereum Transactions

Overview

Your task is to write a simple website that has a live display of the transactions from the most recent ethereum block along with pricing data. The display should update when there is a new block.

Explaining Ethereum Blocks

Each block in the ethereum blockchain is made up of transactions. Transactions have two components—a transfer of 0 or more ether from one address to another, and a set of state changes to the Ethereum virtual machine (EVM). There are usually about 100-200 transactions in any given block, and they occur every 12 seconds. Here is an example.

Details of the Test

You can write the feed in whatever web framework you feel most comfortable with, hosted however you want, formatted however you want. I only ask that you at least display the from/to addresses, the value of the transaction **in ether** (not wei), and the value of the transaction in USD. No need to make the frontend pretty or spend much time on it, just show every transaction for the latest block. You also don't need to show ERC-20 transfers, just ethereum transactions. Though if you can figure out how to do this easily then by all means do so.

There are different sources for block data. They generally fall into two categories: ethereum nodes, or data providers like Etherscan, Blockchair, or Arkham. **You must use an ethereum node**. To make that a bit easier (and cheaper), you may use these endpoints:

- https://eth-mainnet.alchemyapi.io/v2/GNauZOAEhjOc34zQQqQuXorOlmC6wJ6W
- wss://eth-mainnet.alchemyapi.io/v2/GNauZOAEhjOc34zQQqQuXorOlmC6wJ6W

For pricing data, you can use whatever. I recommend CoinMarketCap or CoinGecko.

Please write clean and concise code with good documentation. Treat it like you would if you were writing code for work.

Submission

There are three things we want to see: your website, the code running it, and a short writeup responding to the prompts below. Send a link to a viewable website and share your code with us by some means. A public github repo is fine, so is a private github repo shared with henryperson and tsax, and so is a zip file with the code you used.

For the writeup, please respond to the following questions:

- How does your solution work?
- How many hours did this take you?
- What went well? What went poorly?
- What did you have trouble with/how did you solve it?
- What would you add to your solution if you had more time?

Best of luck!