

Implementation of Blockchain Explorer

6000D Final Project Report

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1. Introduction

The blockchain explorer is quite important for a blockchain DAPP developing platform as it is a window for information displaying and querying, which is very useful for blockchain users and miners.

The project is to make a blockchain explorer as described in the first task of topic 3, ChainWorld. I finished most requirements of this task, including providing guidance, displaying the blockchain information and the accounts information, supporting querying operations, downloading files, and uploading files.

2. Implementation process

I learned by myself to gain the basic knowledge of html, css, js, etc, and then I implemented tasks step by step.

Firstly, I decided on the content of each page, then I used Bootstrap table to construct an appropriate interface of each web page. Thirdly, I wrote the js functions to get/post APIs and put the obtained data into the corresponding tables. Finally, I adjusted the details to make sure that everything goes well. Throughout the whole process, I used the console to debug and adjust continuously.

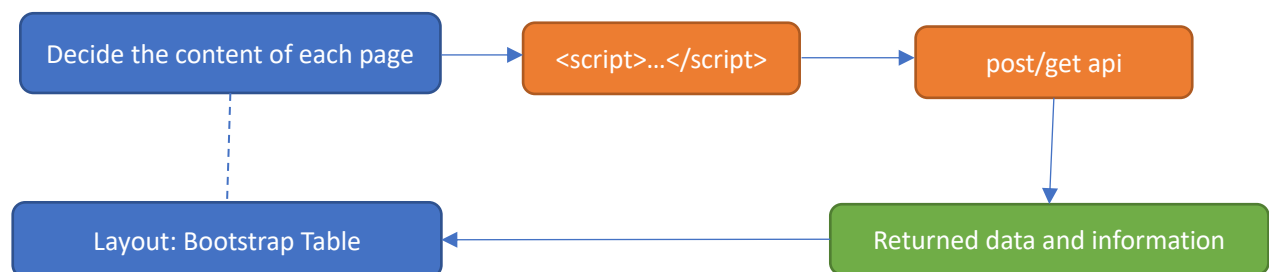


Fig1: Implementation Process

3. Explorer

3.1 Webpages

The following table is the information of each page, including their main functions.

Webpage	Function
accounts.html	Account information
block.html	Display the blockchain information
Transaction.html	
files.html	File upload and download
Index.html	Introduction and guidance of the explorer

Query Contract.html	Query Functions
search_account.html	
transaction-query.html	

3.2 How to use

To see and use the explorer, you need to use a web server, and I used Chorm and Web Server for Chorm. You just need to change the path to the folder, and it will show the index of explorer. It is very simple and easy to use, which I explained more detailedly in the video.

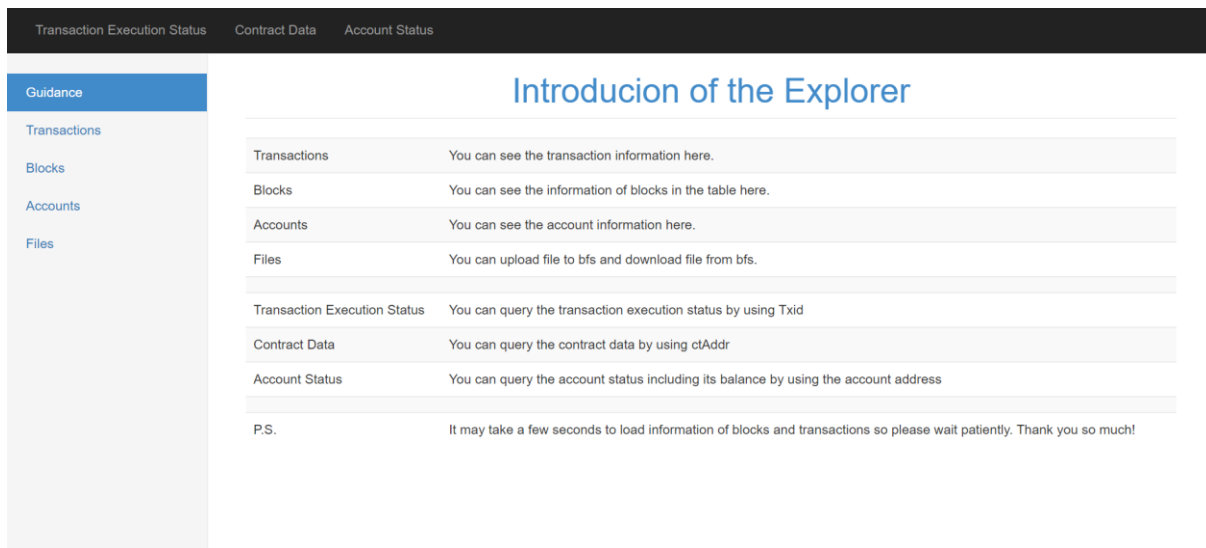


Fig 2: Index of the Blockchain Explorer

4. Conclusion

In this project, I completed most tasks of topic 3.1. The blockchain explorer can display the blockchain information and accounts information. It supports querying transaction execution status, contract data, and account status. It also can download files and upload files, showing the information of the file uploaded.

As for feature work, I may study how to display the file information and details of rewards, which I did not complete due to the limitation of time and my current ability. Besides, I think the interface of my browser is clear and simple, but not very beautiful, which can be another potential improvement.