

USER TEST

Number of requirement which has been tested: 8

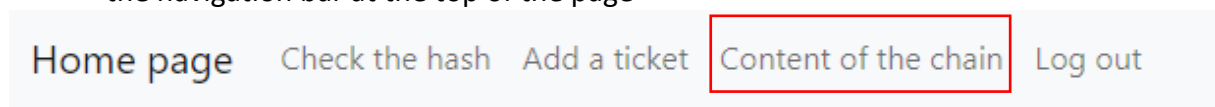
Requirement title: Blockchain Filtering

Requirement description: Application must have the option to print out all blocks within the blockchain as well as filtering its contents by specific categories

Test scenario: User will enter the module where all blocks of the blockchain are shown. User will also get inside each block to check whether the information is stored in it.

Test process and results:

1. To see the whole blockchain user must enter "Content of the chain" module through the navigation bar at the top of the page



2. The module shows all existing blocks in the blockchain. First block of the blockchain is filled with random data as an initializing block and its parameter "Hashcode of previous block" is equal to 0. Every next block is connected one by one and it can be seen on the picture below that every new block also contains an information about hashcode of previous block.

The image shows a screenshot of the 'Content of the blockchain' page. At the top, there is a navigation bar with links: 'Home page', 'Check the hash', 'Add a ticket', 'Content of the chain', and 'Log out'. Below the navigation bar, the title 'Content of the blockchain' is displayed. The main content is a table with three columns: 'Hashcode of the block', 'Hashcode of previous block', and 'Date of block addition to the blockchain'. The table contains 10 rows of data, each representing a block in the blockchain. The first row shows a block with a hashcode of '000dfee75012bc7d0eba3f4d4592b0a334efa7b57ebdb4726aa183c2c91324' and a previous block hashcode of '0'. The subsequent rows show blocks with their respective hashcodes and previous block hashcodes, demonstrating the chain structure.

Hashcode of the block	Hashcode of previous block	Date of block addition to the blockchain
000dfee75012bc7d0eba3f4d4592b0a334efa7b57ebdb4726aa183c2c91324	0	2022-12-24 10:54:02.041763
0005ef7e32bd9ca14ce3dc3213b17a9d5354b13a669718c1f6d2f426a8ce991d	000dfee75012bc7d0eba3f4d4592b0a334efa7b57ebdb4726aa183c2c91324	2022-12-24 10:54:12.351847
00012db764f92d66ba694ee30588a28d3e789226a8a4f0ab9404dac0e0ab06b5	0005ef7e32bd9ca14ce3dc3213b17a9d5354b13a669718c1f6d2f426a8ce991d	2022-12-24 11:01:11.773829
000f40ed27e77d0b317ab0a2bc7885b9468210f3e5dfe26d903a10546b34c2d3	00012db764f92d66ba694ee30588a28d3e789226a8a4f0ab9404dac0e0ab06b5	2022-12-25 10:03:54.676354
000b4781cc18866840a1d3257a0c2fe3b4f80a504b0c1f21e39f0d62a2cc9ad8	000f40ed27e77d0b317ab0a2bc7885b9468210f3e5dfe26d903a10546b34c2d3	2022-12-29 15:39:37.748520
0002c6091cb99a148f03f4f10a6e45d11456f1589d31c72f3a485b06cd3cfa	000b4781cc18866840a1d3257a0c2fe3b4f80a504b0c1f21e39f0d62a2cc9ad8	2022-12-29 21:56:19.970031
000237a96ad99889d756e9167d1764e0638dd443a6c141f221993126eacb2e93d	0002c6091cb99a148f03f4f10a6e45d11456f1589d31c72f3a485b06cd3cfa	2023-01-13 21:07:12.077567
000e670b29e2478e7b7850d9773354b0d2049e1636215b97845a326fa436b15e	000237a96ad99889d756e9167d1764e0638dd443a6c141f221993126eacb2e93d	2023-01-13 21:10:29.248863
0006f4f975f584e611d91ab3b2ef9b1f718079ed5985eb7e3b56f7d1645683b	000e670b29e2478e7b7850d9773354b0d2049e1636215b97845a326fa436b15e	2023-01-13 21:12:36.302161
0003852845b1199b48f0e0583e6069dae5a49e5da49b9ee0f03dfbce283317	0006f4f975f584e611d91ab3b2ef9b1f718079ed5985eb7e3b56f7d1645683b	2023-01-13 21:14:26.953882

3. To get inside the block, user clicks one of the hashcodes. On the picture below it can be seen what is the content of selected block. It should contain all data which was filled in the form in module which adds new ticket to database.

[Home page](#) [Check the hash](#) [Add a ticket](#) [Content of the chain](#) [Log out](#)

Details of the block with hashcode:

000db3ef85e3f661ce7ee072b4f5b5b1b36763b8ec5bb62af2ef62bed0f3512c

Details of the block with hashcode 000db3ef85e3f661ce7ee072b4f5b5b1b36763b8ec5bb62af2ef62bed0f3512c

Name: Testname
Surname: Testsurname
PESEL (hashcode): [6de27dc787085776a6513f622f06174b49de8b4694129d615ee6588be2751f04](#)
Number of the badge (hash): [a665a45920422f9d417e4867efdc4fb8a04a1f3fff1fa07e998e86f7f7a27ae3](#)
Fine amount (in PLN): 500
Number of penalty points: 3
Date of ticket addition: 2023-01-13 21:19:41.141219

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4. Requirement to get inside the block and check what data is inside is fulfilled, but there are another options inside. User can click on the hashcode of PESEL or badge which are stored in the block. When clicked on hashcode of the badge, application shows all tickets which are connected to this badge. It means that user can check all tickets given by one policeman. As an example there is a picture below of data connected to one badge.

[Home page](#) [Check the hash](#) [Add a ticket](#) [Content of the chain](#) [Log out](#)

Details about policeman with badge number

a665a45920422f9d417e4867efdc4fb8a04a1f3fff1fa07e998e86f7f7a27ae3

PESEL hashcode	Fine amount (PLN)	Number of penalty points	Date of ticket addition to the blockchain
c775e7b757ede630cd0aa1113bd102661ab38829ca52a6422ab782862f268646	500	3	2023-01-13 21:07:12.536871
254aa248acb47dd654ca3ea53f48c2c26d641d23d7e2e93a1ec56258df7674c4	500	3	2023-01-13 21:10:29.701197
a665a45920422f9d417e4867efdc4fb8a04a1f3fff1fa07e998e86f7f7a27ae3	500	3	2023-01-13 21:12:36.748595
6de27dc787085776a6513f622f06174b49de8b4694129d615ee6588be2751f04	500	3	2023-01-13 21:19:41.141219
63640264849a87c90356129d99ea165e37aa5fabc1fea46906df1a7ca50db492	500	5	2023-01-13 22:39:48.154474
63640264849a87c90356129d99ea165e37aa5fabc1fea46906df1a7ca50db492	500	5	2023-01-13 22:40:46.965054

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The same happens while clicked on hashcode of PESEL. Application shows all tickets which specified person received (PESEL is unique for every citizen of Poland).

[Home page](#) [Check the hash](#) [Add a ticket](#) [Content of the chain](#) [Log out](#)

Details of person with PESEL

6de27dc787085776a6513f622f06174b49de8b4694129d615ee6588be2751f04

Badge hashcode	Fine amount	Penalty points	Date of ticket addition to the blockchain
a665a45920422f9d417e4867efdc4fb8a04a1f3fff1fa07e998e86f7f7a27ae3	500	3	2023-01-13 21:19:41.141219

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