# Sprint Retrospective, Iteration # 4

Context Project: Blockchain
Group: BullsBearsWolves

| User Story | Task | Task Assigned To | Estimated Effort per Task *(in hours)* | Actual Effort per Task *(in hours)* | Done? *(yes/no)* | Notes |
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| As a developer, I want to have a draft of the structure of the Graphical User Interface | Document describing MainActivity page. | Ymte | 3 | A | no | |
| | Document describing OwnChain page. | Ashay | 3 | 2 | yes | Contacts Page |
| | Document describing ConnectedChain page. | Naqib | 3 | 2 | yes | This is actually the friends page. |
| As a developer, I want my block in my blockchain to have an IBAN attribute. | Implementation | Luat | 2 | 3 | yes | |
| | Testing | Luat | 1 | 1 | yes | |
| As a developer, I want to use my predefined | Implementation | Naqib | 4 | 9 | yes | Took way more effort than I think it would. I |

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| blockchain to simulate a transaction. | | | | | | was dependent on some other tasks. |
| | Testing | Naqib | 4 | 8 | no | Still did not manage to unit test this since it is an activity. Maybe I will find a solution today. |
| As a developer, I want to have a predefined blockchain, which represents a chain of someone else. | Implementation | Naqib | 2 | 2 | yes | |
| | Testing | Naqib | 2 | 3 | no | |
| As a developer, I want my code to contain the Adapter design pattern for the controller. This way it is easier to see how to use the methods of the class. | Testing | Jasper | 4 | 4 | No | An adapter design pattern was unnecessary, since we are only creating a block and thus there is nothing to adapt too. Instead I created an interface for the blockcontroller and refactored the databasehandler. |
| | Documentation in architecture design | Jasper | 2 | 3 | No | See comment above |
| | Implementation | Jasper | 4 | 5 | No | See comment above |
| As a developer, I want my application to display only items that | Implementation | Ymte | 2 | C | | |

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| are useful for users. The only ordered useful items are the name/description, IBAN.. | Testing | Ymte | 3 | C | | |
| As a developer, I want my application to backtrace the owner name of a given public key via a function call so I can display it in my contact overview | Implementation | Luat | 4 | 5 | yes | |
| | Testing | Luat | 1 | 1 | yes | |
| As a developer, I want my application to display for each owner the trust. | Implementation | Ashay | 4 | 4 | yes | Is not merged, because I needed code from someone else to completely finish the functionalities, which was located in a PR which hasn't been merged. |
| | Testing | Ashay | 4 | 0 | no | Because I didn't have correct functionalities, it was impossible to write tests. |
| As a developer, I want to be able to display the average trust value of all | Testing | Ashay | 4 | 0 | no | Because I didn't have correct functionalities, it was impossible to write tests. |
| | Documentation | Ashay | 2 | 2 | yes | |

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| blockchains in a fancy graph-like style. | Implementation | Ashay | 4 | 4 | yes | The graph is implemented, but not merged, needed functionalities, which was located in a PR which hasn't been merged. |
| As a user , I want to be able to confirm before I truly add or delete a contact because I might clicked add/delete accidently. | Implementation | Naqib | 2 | 0 | no | Since our plan changed and we do not have a add activity page, this is also not applicable. |
| | Testing | Naqib | 3 | 0 | no | Since our plan changed and we do not have a add activity page, this is also not applicable. |
| As a developer, I want my application to display a list of blocks, with the option to add blocks in ConnectedActivity and revoke in OwnPage. | Implementation of Connected Activity | Naqib | 4 | 3 | yes | Like I said before, we do not have a 'ConnectedActivity'. We have Pair button where we hardcoded a chain of blocks. Also we can not revoke blocks in the pair or friends page. I advise you to read the documents of the GUI. |
| | Implementation of OwnChain | Ashay | 4 | 5 | yes | Implemented, but not merged. See why above. |

| As a developer, I want to calculate the trust of a block. The trust level will depend on several points, like if the IBAN is verified, if the key has been stolen, etc. | Testing | Jasper | 4 | 4 | yes | |
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| | Documentation | Jasper | 2 | 2 | yes | |
| | Implementation | Jasper | 4 | 4 | yes | |
| As a developer, I want my application to update the visual representation of the blockchain upon modifying; adding or revoking the blockchain. | Implementation of Connected Activity | Naqib | 2 | | | This is done by Ashay. |
| | Testing of Connected Activity | Naqib | 2 | 2 | no | Did not manage to test the activities. |
| | Implementation of OwnChain | Ashay | 2 | 1 | yes | Was almost trivial, but isn't merged, see why above. |
| | Testing of OwnChain | Ashay | 2 | 0 | no | |
| As a developer, I want my application uses methods from BlockController instead of DatabaseHandler | Implementation | Luat | 2 | 4 | yes | |
| | Testing | Luat | 2 | 1 | yes | |
| As a developer, I want to be able to encode | Testing | Jasper | 4 | 4 | yes | |
| | Documentation in architecture design | Jasper | 2 | 2 | yes | |

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| and decode the personal information in a block, like owner/description. | Implementation | Jasper | 4 | 4 | yes | Have chosen for an AES-CBC encryption protocol. |
| As a developer, I want a part of the API that stores keys, contact names, and ibans | Testing | Ymte & Luat | 4 | 7 (Luat), 7 (Ymte) | yes | Mostly worked together via Skype, TeamViewer and real-life. |
| | Documentation in architecture design | Ymte & Luat | 2 | 0.5 (Ymte) | yes | |
| | Implementation | Ymte & Luat | 3 | 4(Luat), 6(Ymte) | yes | Same. |
| As a developer, I want a part of the API to retrieve keys, contact names, and ibans | Testing | Ymte & Luat | 4 | 5(Luat), 12(Ymte) | yes | A lot of debugging was necessary to fix some failing tests. |
| | Documentation in architecture design | Ymte & Luat | 2 | 0.5 (Ymte) | yes | API interface is simple and did not need much documentation. |
| | Implementation | Ymte & Luat | 4 | 7(Luat), 6(Ymte) | yes | |
| As a developer I want my application to be able to log into/ register | Implementation | Luat | 4 | 1 | no | This is not implementable while staying decentralized. |

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| my own account on the app | | | | | | |
| | Testing | Luat | 3 | 0 | no | |
| Fixing Continuous Integration | Implementation | Jasper & Ashay | 4 | 25 | no | Build is now passing, except CheckStyle is still not included. Travis for Android is just very hard to implement. |
| Issue #46: Remove sequence number from Block class and all other instance that uses it | Implementation | Luat | 2 | 2 | yes | This includes adjusting the tests. |
| Fixing latest develop merge error and a fatal error (See Issue #57 for more details) | Implementation | Luat | N/A | 6 | yes | FATAL error from latest develop merge, when the database handler get block back from database, it fails to assign the value sequence number to the new block it makes from the information from the block it got from the database. This includes adjusting the tests. |

| Fixing a lot of checkstyle | Implementation | Luat & Ymte | N/A | 1 & 2 | yes | Finding a good Checkstyle + PMD + Findbugs implementation for Android is not trivial and does not run on CI. We have a local implementation. |
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## Problems Encountered:

1. Ashay: Ashay couldn't finish his tasks because the code he was depending on, wasn't there. Even though he wanted to this himself.
2. Ashay: Again, some members were too late with finishing up their tasks. This caused a lot of stress on friday, and the code also contained some errors/bugs, which resulted in too little time to fix these.
3. Ashay: The pull request, which emerged on thursday, contained a lot of code from various team members. Because it emerged so late, and it was so big, code review took too long, and resulted in a lot of comments which needed to be fixed. The pull request emerged from improper branching: to obtain fixes from other branches, separate feature branches were merged into each other while not being merged back to the develop branch, which resulted in the big PR.
4. Ymte: The structure of the program took me a while to comprehend since the code is very complex and documented poorly; everyone had to understand design details separately..
5. Ymte: Documentation for the API is small as there is not a lot of functionality to expose. Most of the work happens behind the screen inside the complex machinery that is BBW.
6. Luat: There was a fatal error which I and Ymte discovered on Wednesday afternoon, many members were getting errors from their codes by using the methods that contain this error.  This have been addressed and fixed on Thursday.
7. Luat: Some members are not available and waited a long time before responding to a PR fix, this delays the whole PR.
8. Luat: Some members have problems, but they keep them to themselves, this result in a bad collaboration in the group.

9. Jasper: It took a very long time, before everyone finished their task. A lot of the work was done in the final two days. This wasn't a good process.