# AUDIT CHAIN

## AMOS PROJECT SS2022

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# Outline


1. Introduction
2. Blockchain
3. RabbitMQ
4. Docker
5. Producer Dummy
6. Consumer Dummy
7. GUI
8. Testing
9. Conclusion

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  - and scale-out storage solutions.

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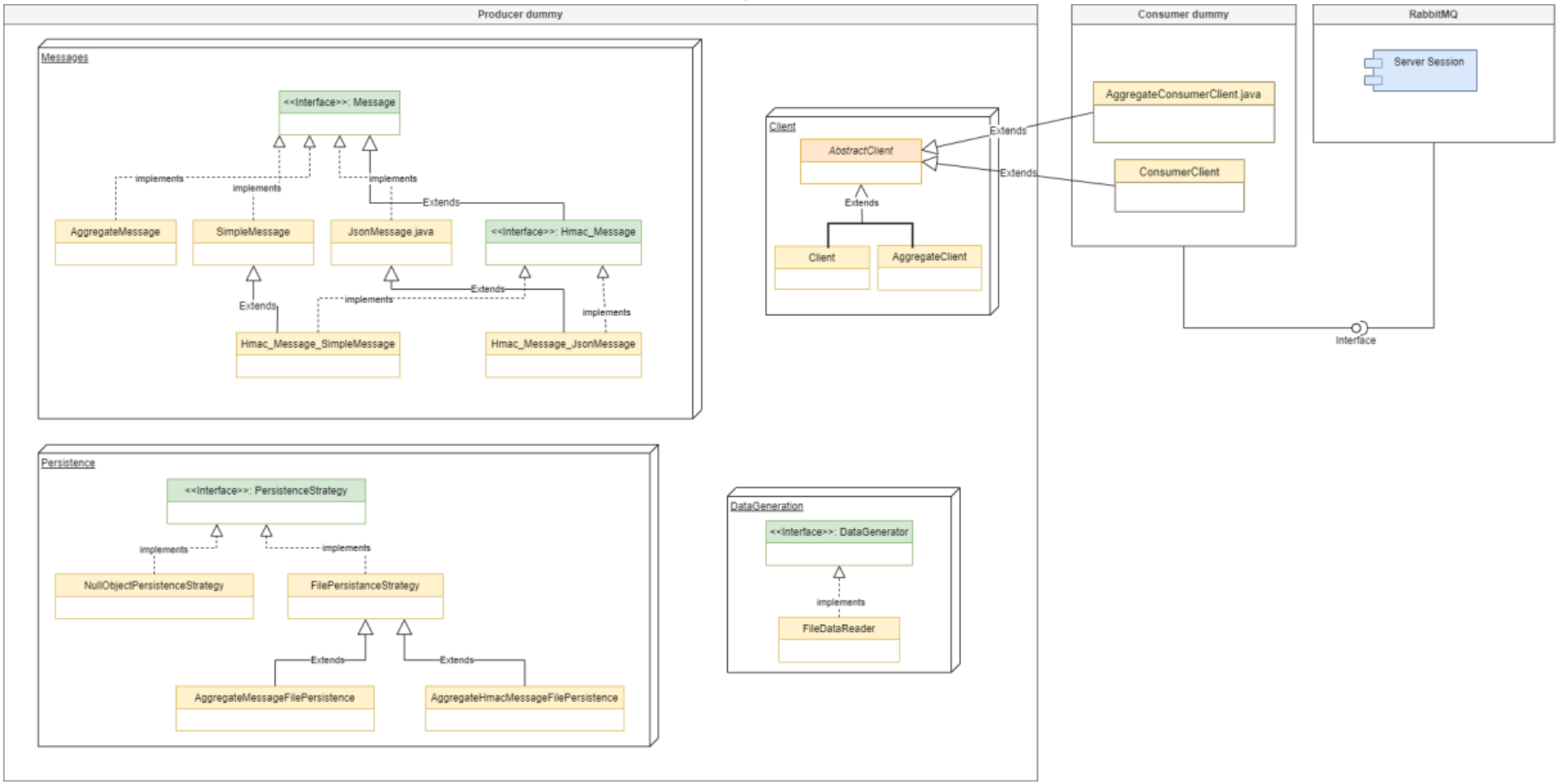
- For this purpose there is a **central event queue**, which receives events from a **producer** and provides them a **consumer**, which is built on a underlying **blockchain** data structure.
- Finally, the event will be copied in a second consumer and will be deleted from the event queue.

# Introduction

## Here is a diagram of our work



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- It is not only a simple back linked list, in fact each block contains a hash of the previous block.
- It is not possible to edit the blockchain by adding or removing blocks in the middle or changing them

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  - Real Estate etc.

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  - Added the feature that checks automatically itself to see if some messages stored in a range have been tempered.
- Finally, we tested our program by creating the JUnittest with a direct channel between producer dummy and consumer without the queue.

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- RabbitMQ is a 3rd party program that we are using as a component for queuing events.

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  - the software works better.

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- In our case, producer dummy creates the events that are then stored in the central queue which will be used later from consumer dummy.

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- Consumers can approach the queue, in order to get the events and work with them accordingly. Events are recorded serially and the central event queue is transmitted via the network queue.
- In our case, after the implementation of producer dummy, our consumer dummy would use the events that are created and stored in the central queue for further processing, like storing.

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- Users can perform any action without having to know any programming language in this friendly visual environment.
- In our project, we implemented a nice GUI and at the same time we improved the functionality of Blockchain with the following features:
  - from sequence number return the message if tempered,
  - from two sequence number return the tempered messages in that interval,
  - show how many events does the Blockchain hold,
  - show how many files does the Blockchain hold,
  - show much space the Blockchain occupies.

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- This is done to make sure that nothing in the code is broken.
- We have JUnit Tests for the following cases:
  - JUnit Tests Producer Dummy
  - JUnit Tests Consumer Dummy
  - JUnit Tests Blockchain

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# Conclusion

We had a great time together and we really enjoyed our time!