Overview of the RSocket Shakespeare Quotes App

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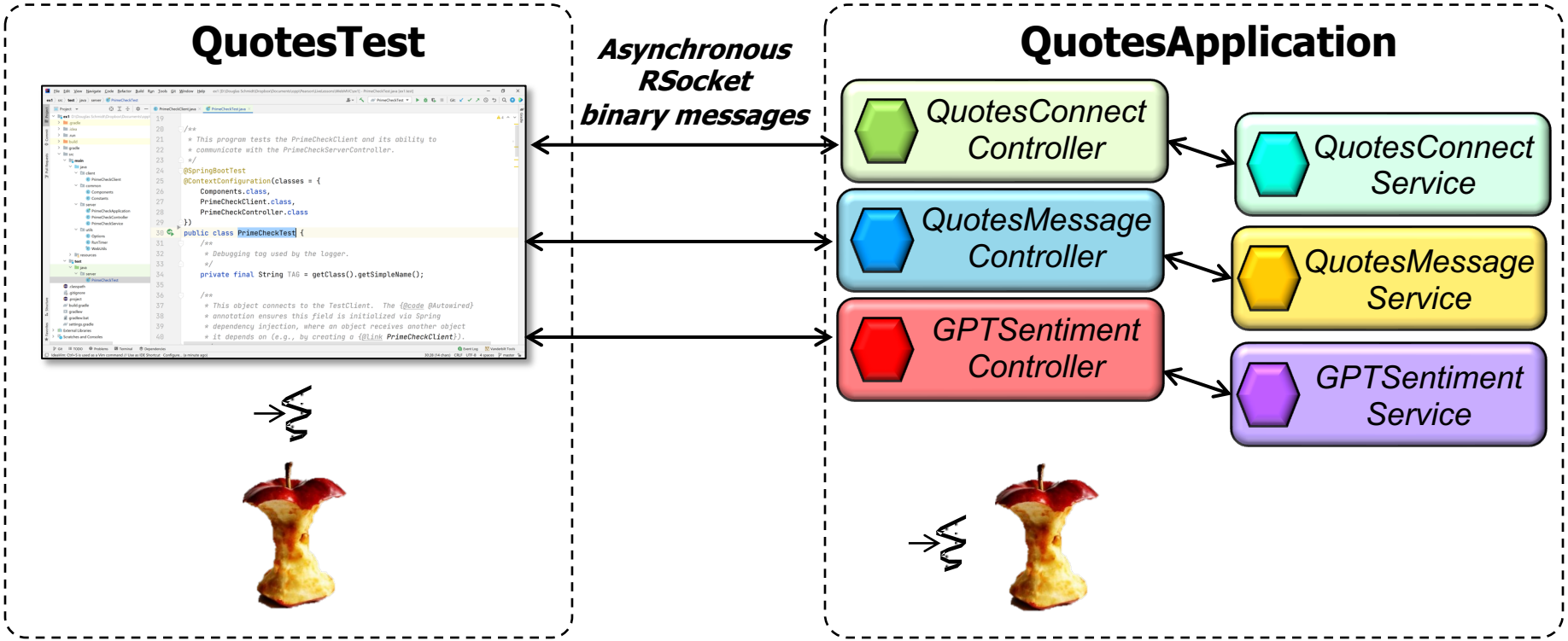
Learning Objectives in this Lesson

- Understand how Spring RSocket & ChatGPT can be used to analyze the sentiment of famous Shakespeare quotes asynchronously



See github.com/douglascraigschmidt/LiveLessons/tree/master/RSocket/ex3

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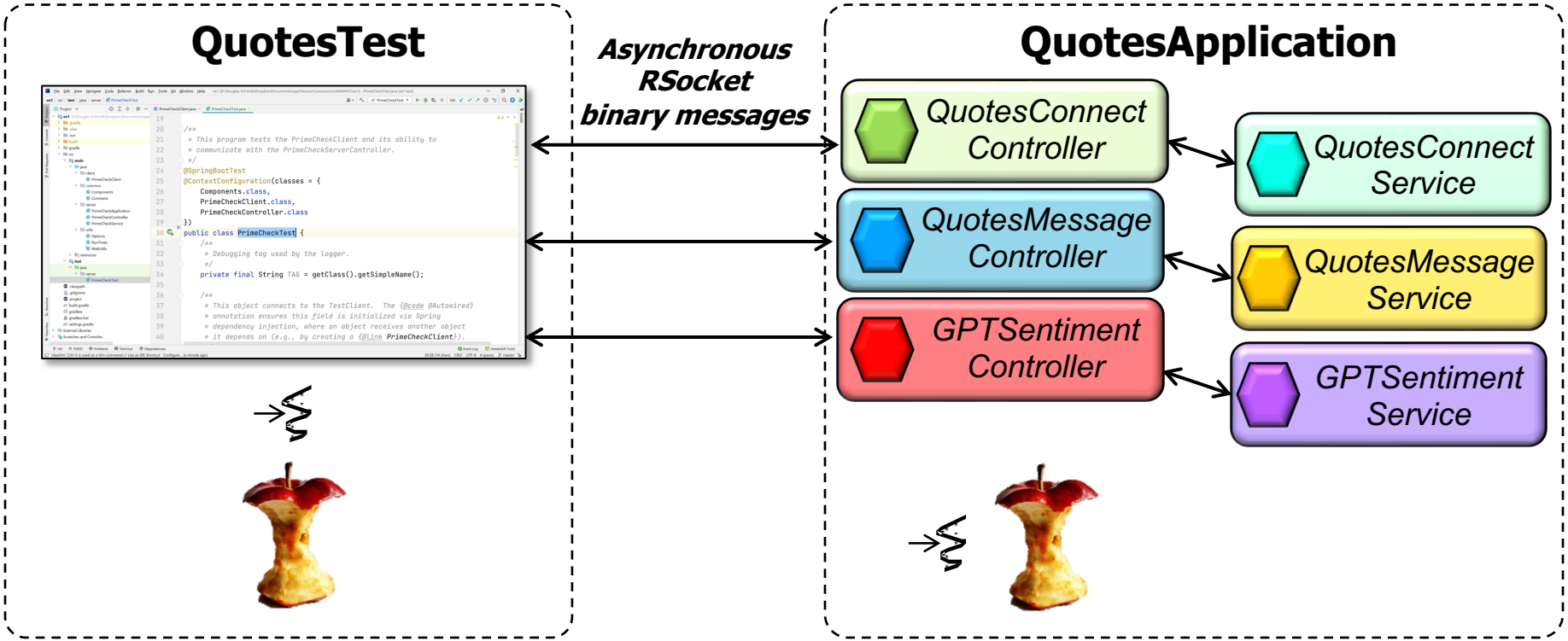

This example also shows how to use RSocket security & authentication features

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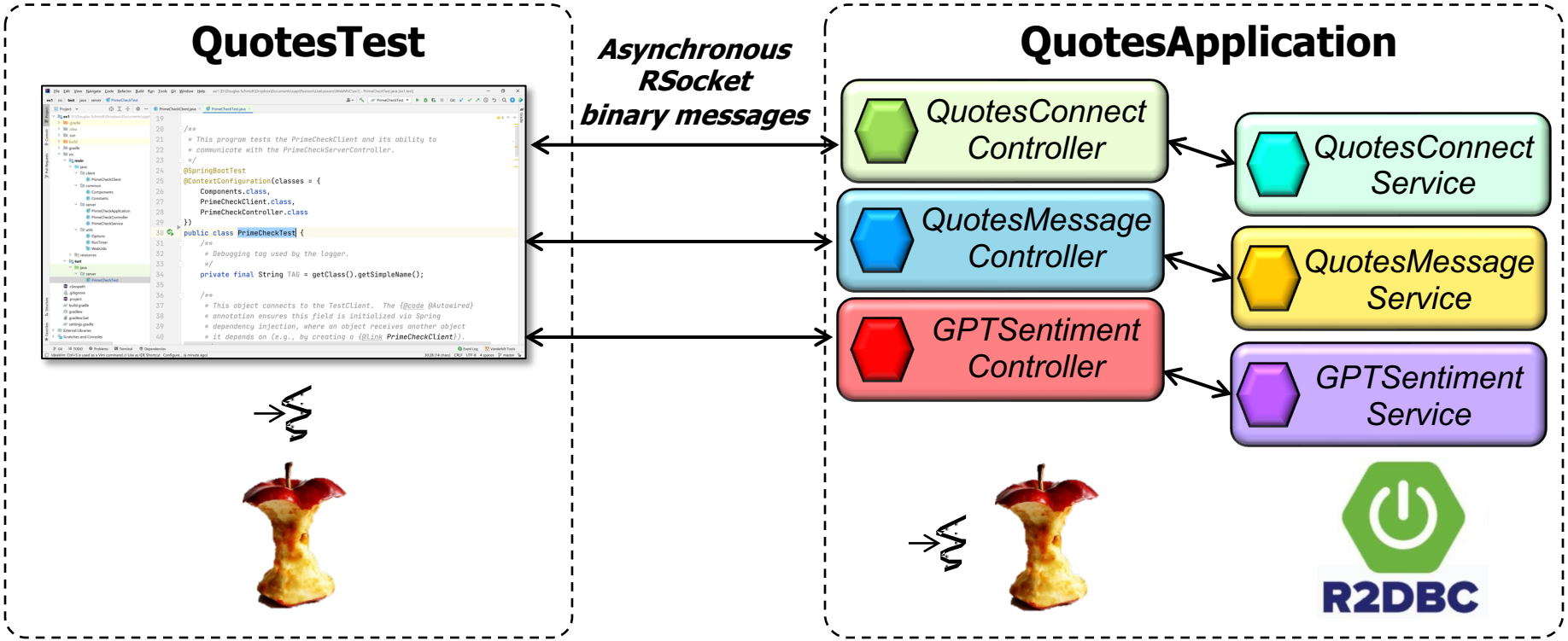

As well as the R2DBC reactive database used to retrieve Shakespeare Quotes

Overview of the RSocket Shakespeare Quotes App

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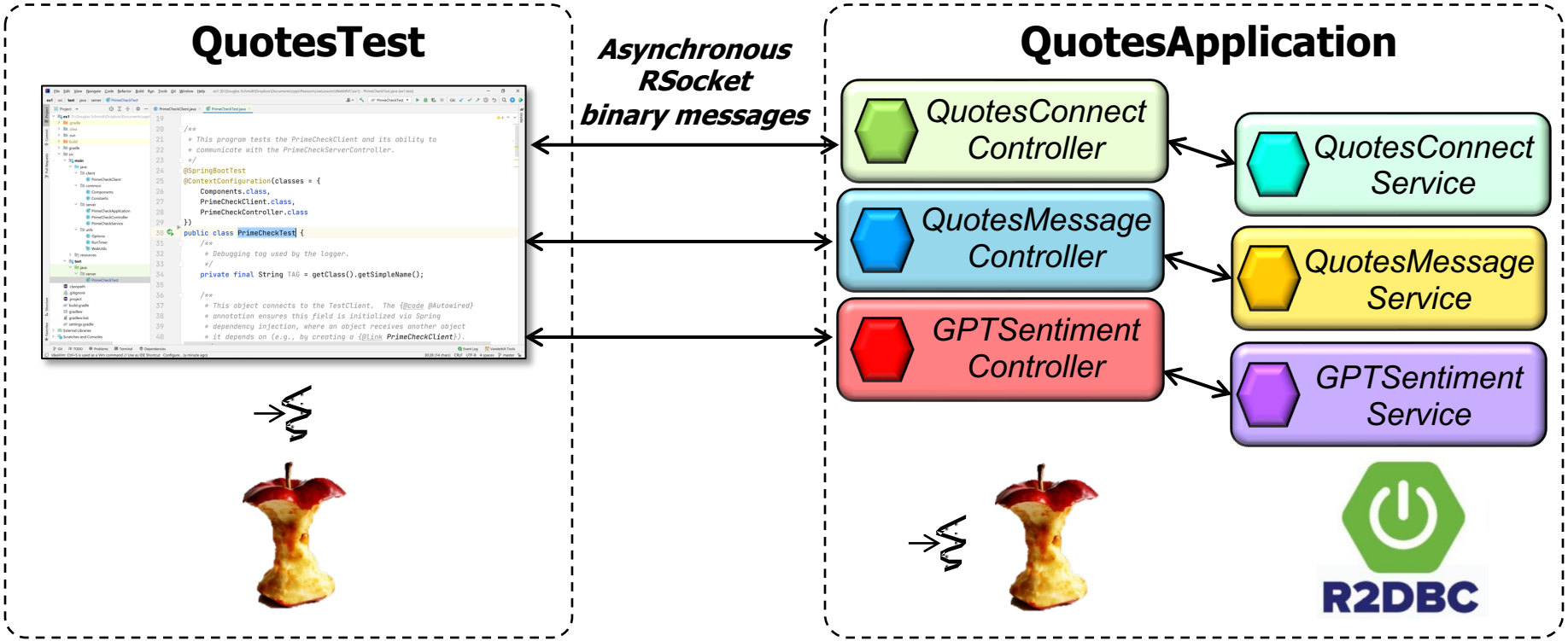
- This case study shows how an RSocket requester can exchange binary messages asynchronously with various controllers & services



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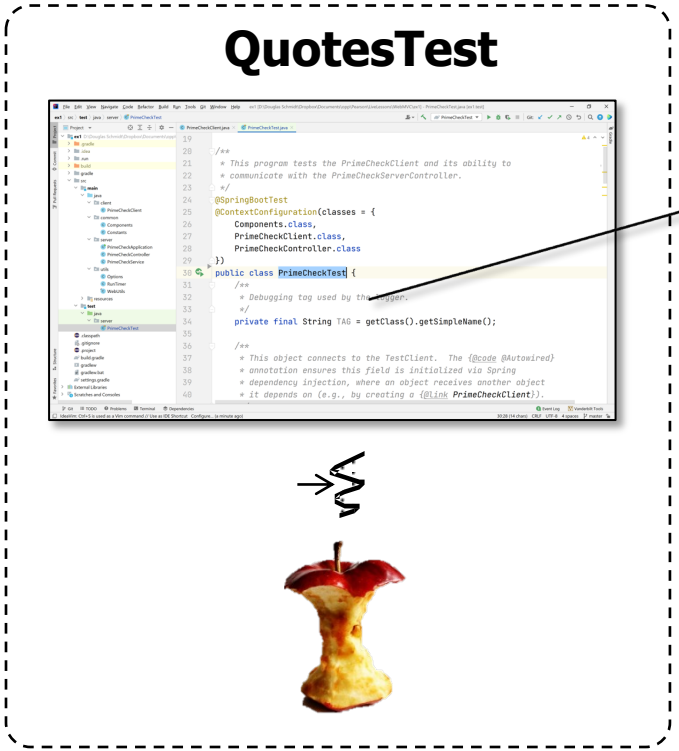

The requester can asynchronously connect to the responder, subscribe to receive shakespeare quotes, & then use ChatGPT to analyze the sentiment of these quotes

The requester also authenticates itself to the responder

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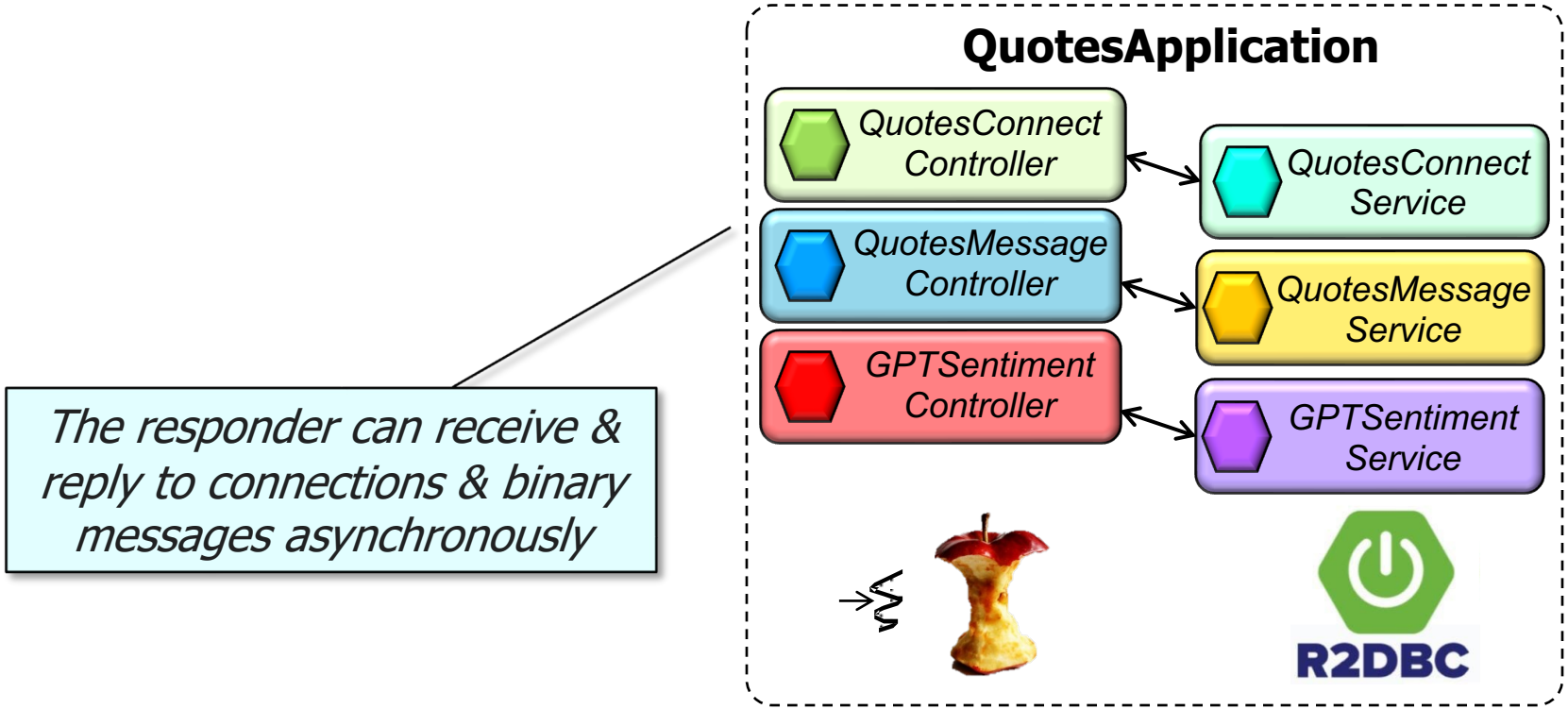

The responder requires the requester to authentic before finalizing the connection

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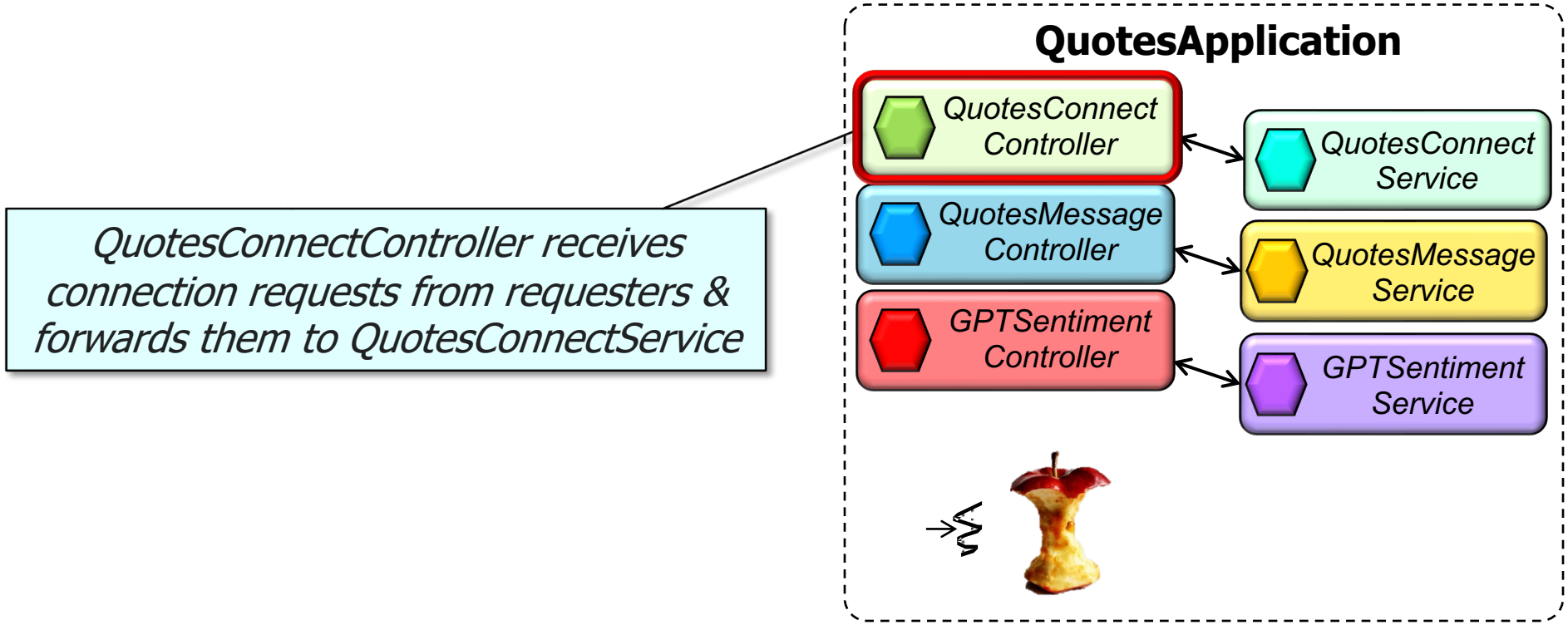

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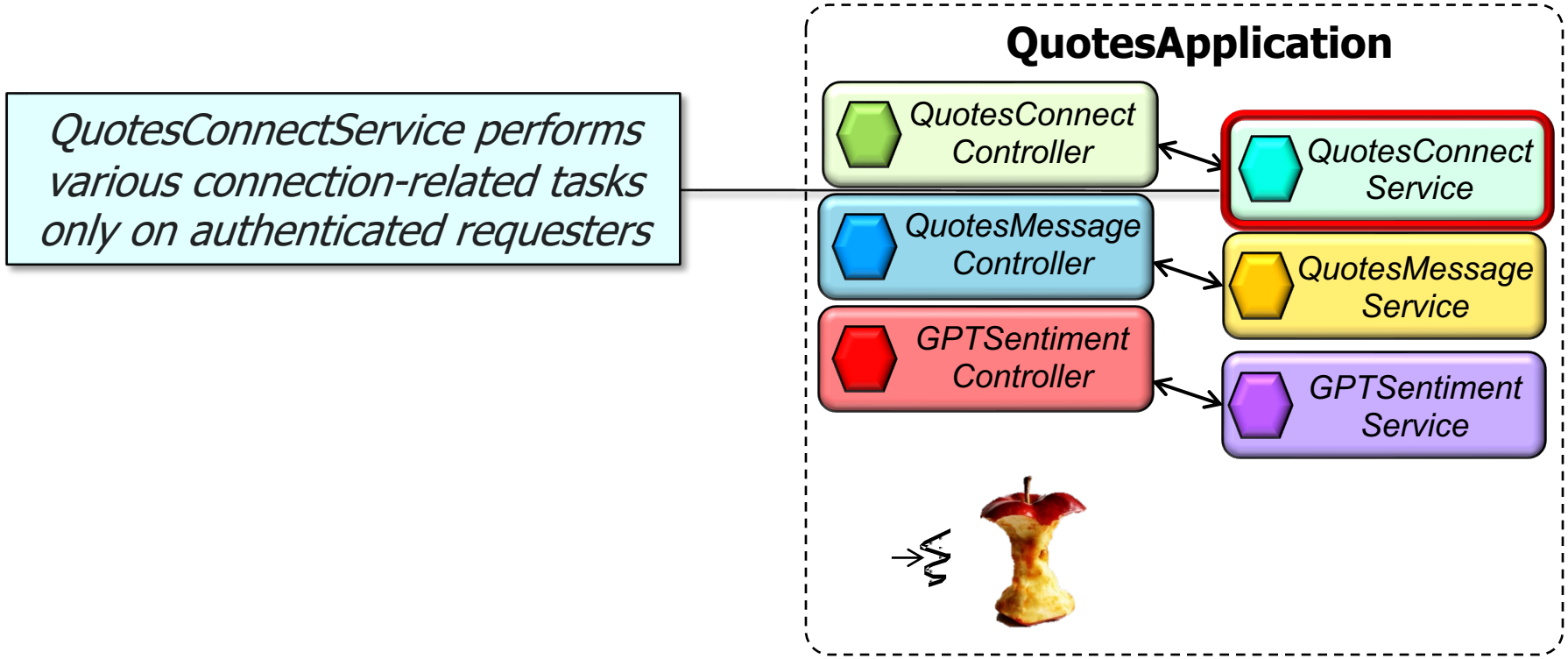

RSocket & Spring perform authentication transparently to the responder itself

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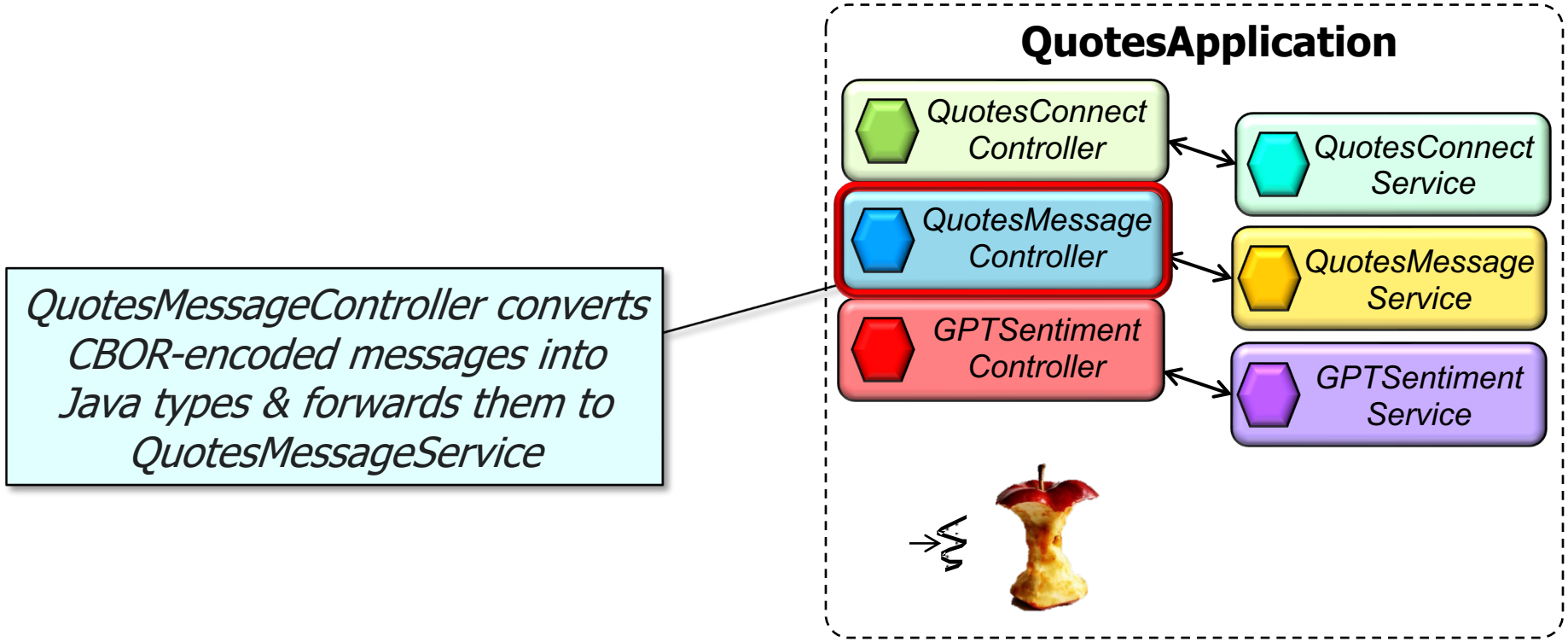

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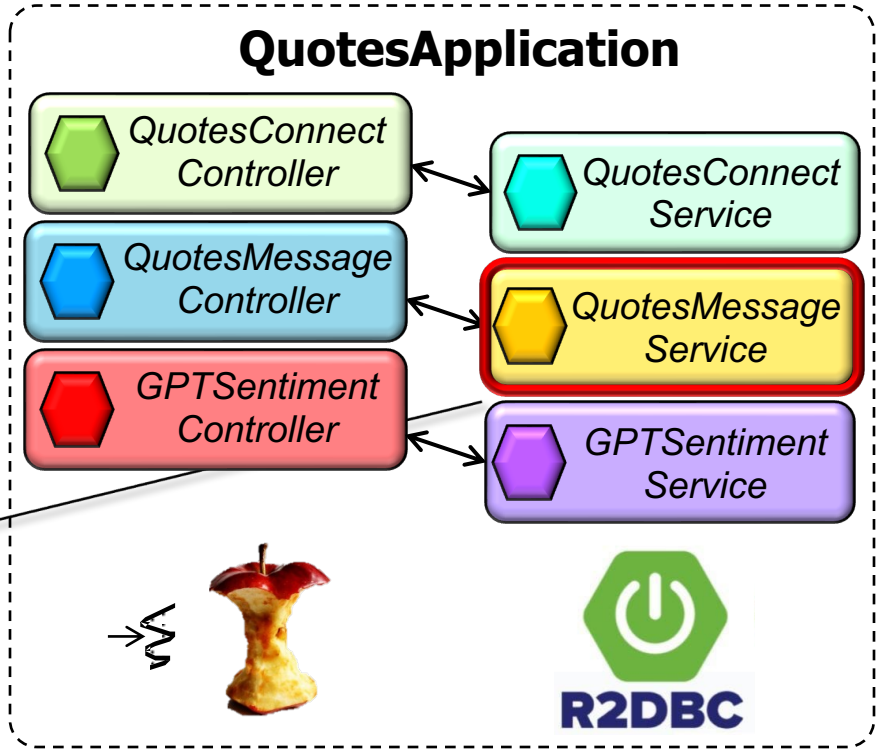

QuotesMessageService implements methods that process requester message requests & return associated subscriptions & Shakespeare quotes

The QuotesMessageService retrieves quotes from an R2DBC database

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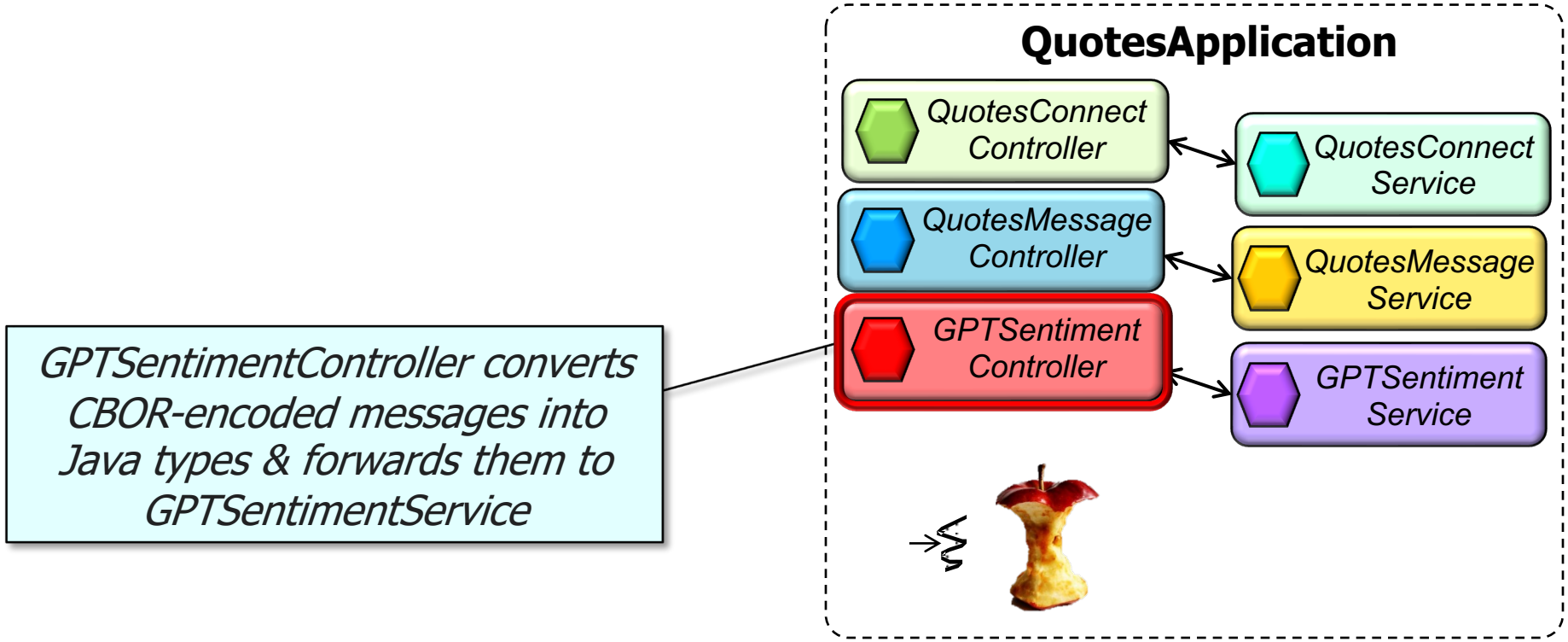

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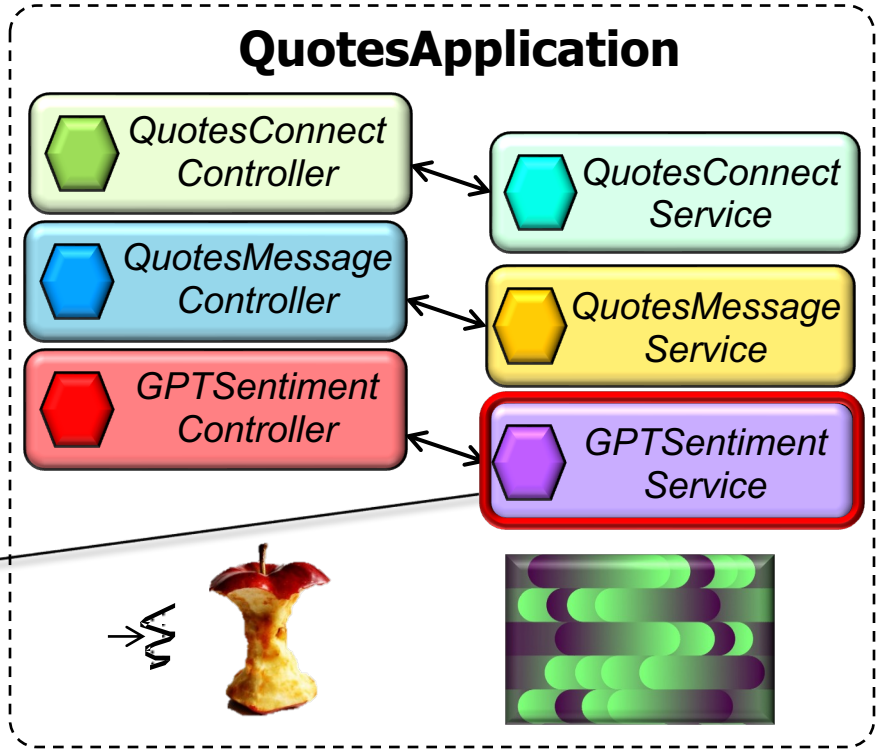

GPTSentimentService implements the methods that use ChatGPT to analyze the sentiment of Shakespeare quotes

See openai.com/blog/introducing-chatgpt-and-whisper-apis

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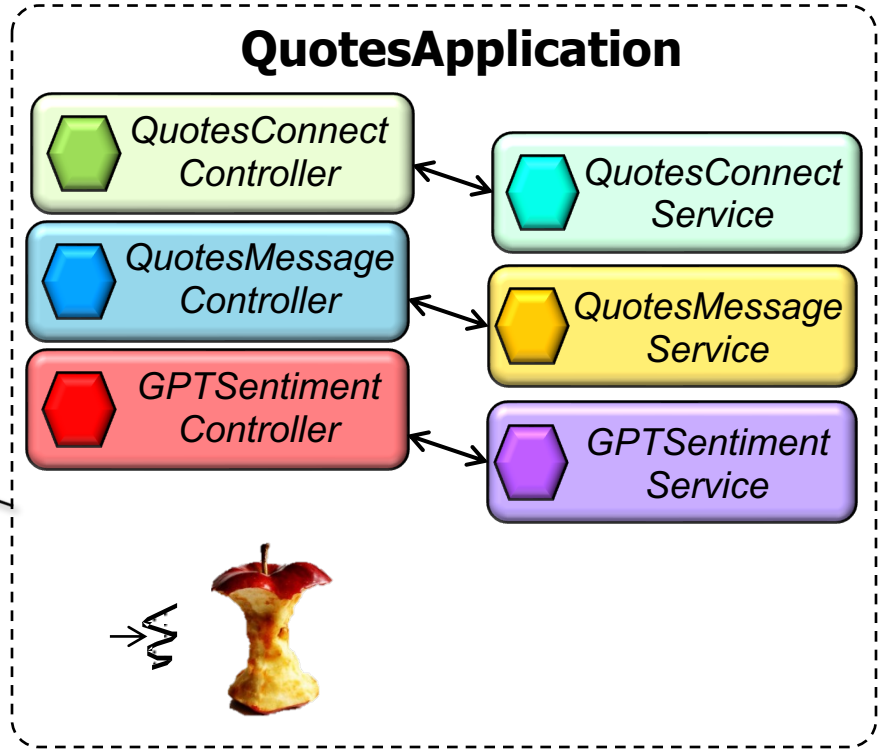
These controllers & services all currently reside in a single microservice to simplify testing, but it's easy to separate them



Structure & Functionality of the Shakespeare Quotes App

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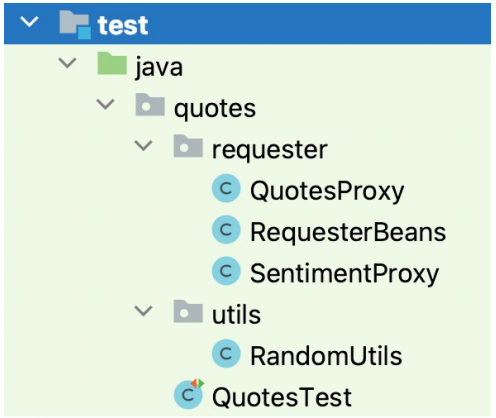
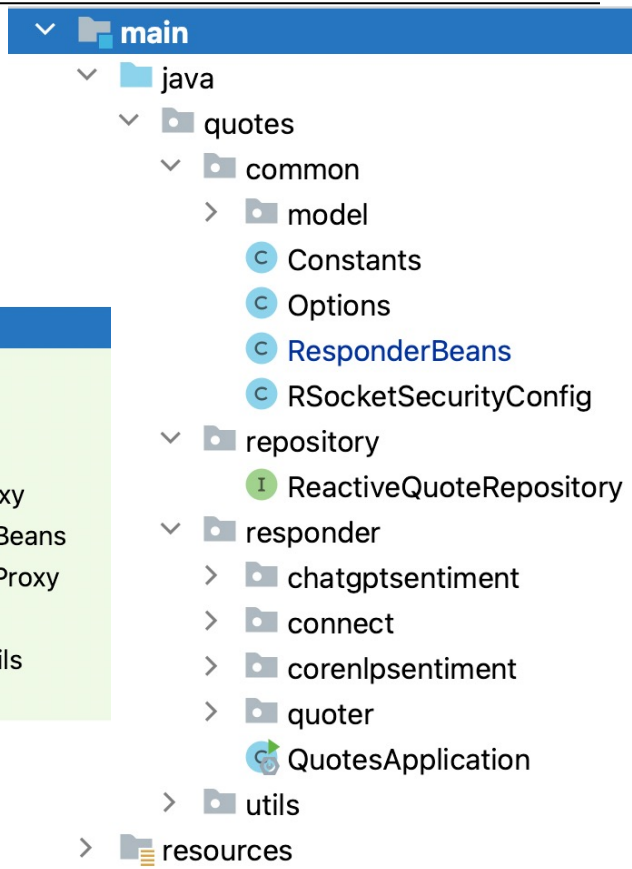
- The RSocket Shakespeare Quotes App project source code is organized into several packages





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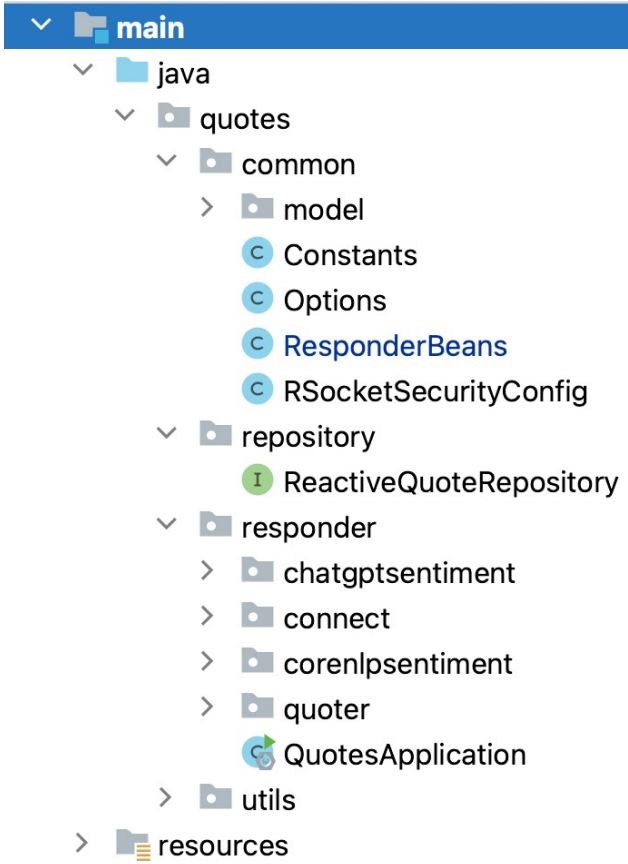
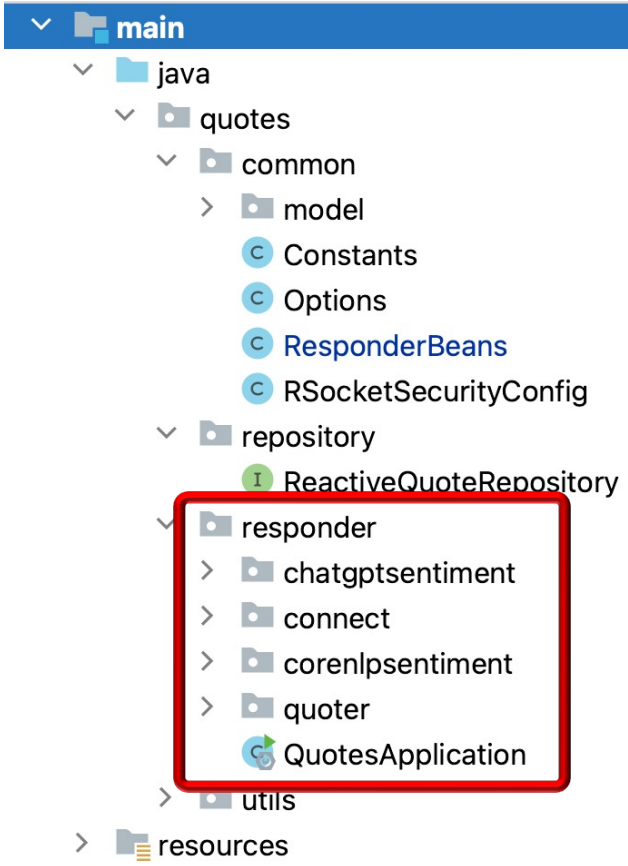


Structure & Functionality of the Shakespeare Quotes App

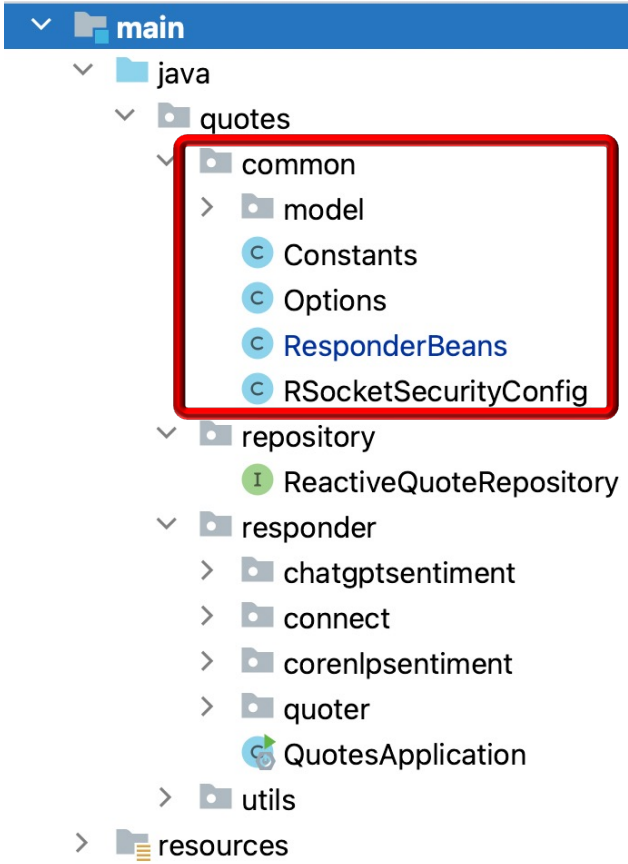
- The RSocket Shakespeare Quotes App project source code is organized into several packages
  - The main folder contains the responder-side classes
    - responder
      - The Application, Controller, & Service classes that enable message reception & responses, as well as ChatGPT sentiment analysis



These controllers & services could be separated into different microservices

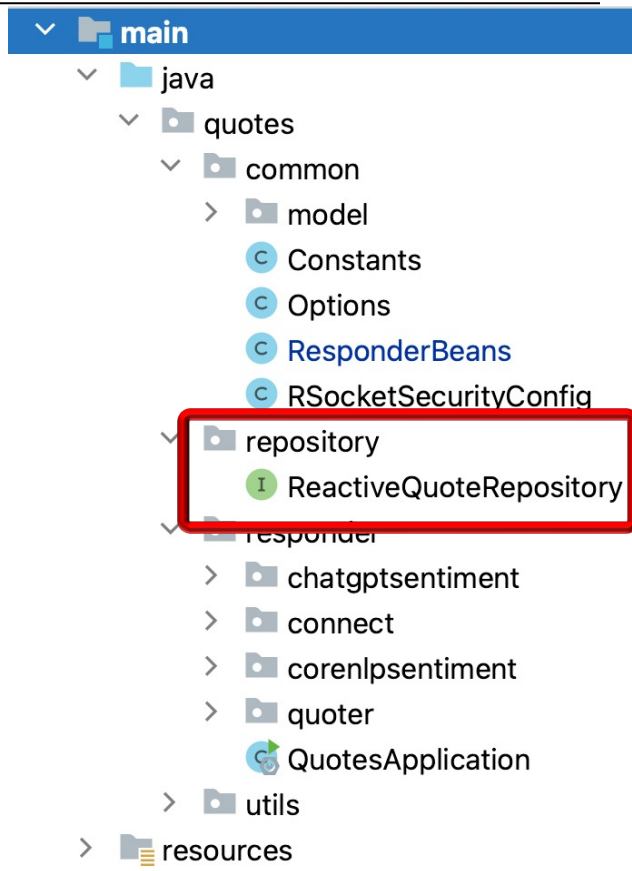
Structure & Functionality of the Shakespeare Quotes App

- The RSocket Shakespeare Quotes App project source code is organized into several packages
  - The main folder contains the responder-side classes
    - responder
    - common
      - The project-specific reusable classes, including a security module



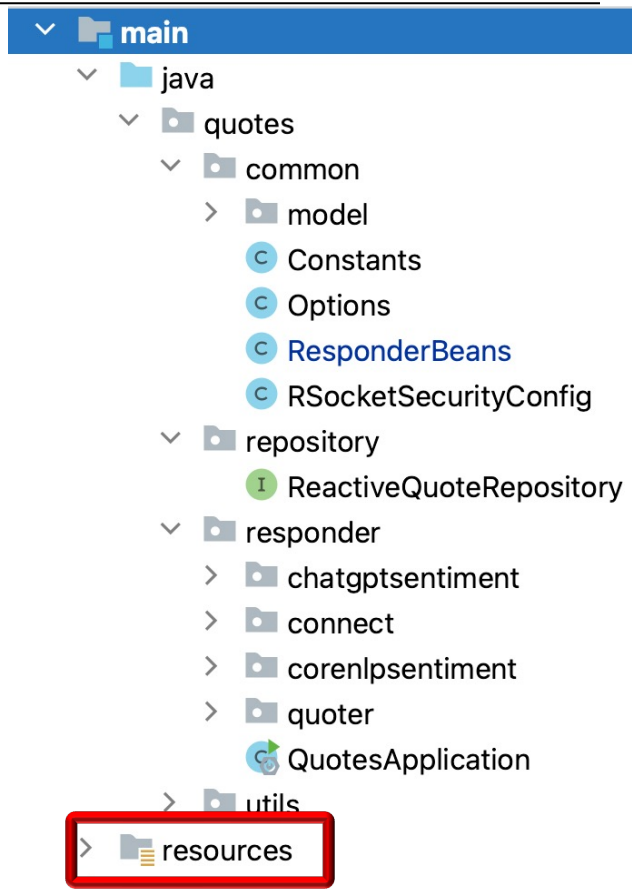
Structure & Functionality of the Shakespeare Quotes App

- The RSocket Shakespeare Quotes App project source code is organized into several packages
  - The main folder contains the responder-side classes
    - responder
    - common
    - repository
      - The R2DBC database containing the Shakespeare quotes



Structure & Functionality of the Shakespeare Quotes App

- The RSocket Shakespeare Quotes App project source code is organized into several packages
  - The main folder contains the responder-side classes
    - responder
    - common
    - repository
    - resources
      - The responder name, port number, R2DBC database configurations, & Shakespeare quotes data in SQL format



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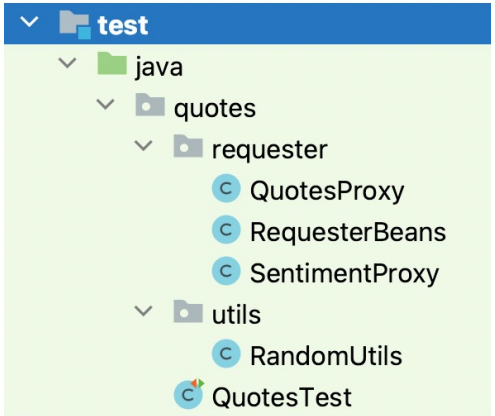
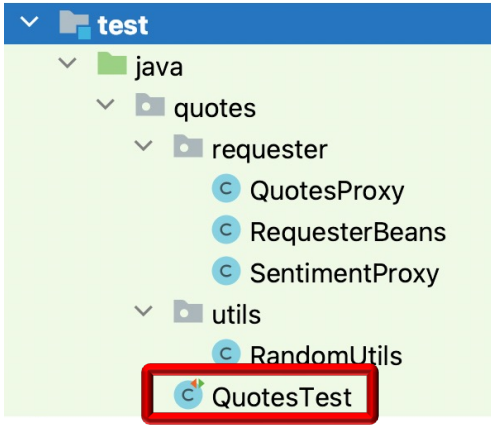
  - The test folder contains the requester-side classes



Structure & Functionality of the Shakespeare Quotes App

- The RSocket Shakespeare Quotes App project source code is organized into several packages
  - The main folder contains the responder-side classes
  - The test folder contains the requester-side classes
    - The test driver that connects with the responder & exchanges messages



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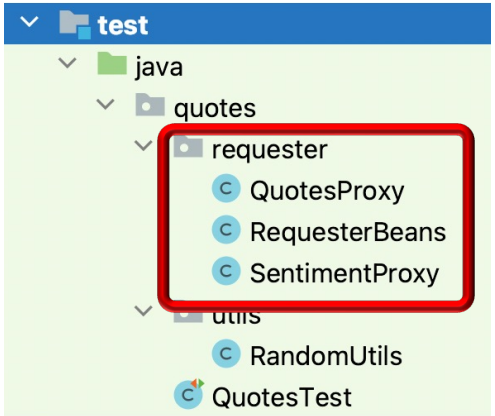
  - The test folder contains the requester-side classes
    - The test driver that connects with the server & exchanges messages
    - requester
      - The proxies & requester bean that establishes a secure connection with the responder & sends/receives binary messages



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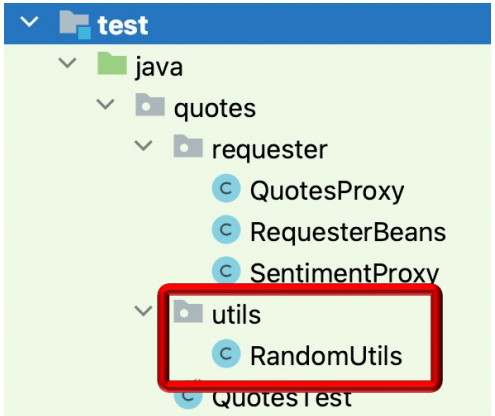
  - The test folder contains the requester-side classes
    - The test driver that connects with the server & exchanges messages
    - requester
    - utils
      - A project-independent reusable class that generates random numbers



End of Overview of the RSocket Shakespeare Quotes App