Project structure:

Query accommodations part:

availability-service

*This service has two methods. The first one returns **all** accommodations (and their specs) that are in the accommodations database. The second one retrieves a tuple of available accommodation_id's given a set of query parameters.*

- **Retrieve all accommodations [GET]**
    - i. Input: path variable: /all/
    - ii. Output: array[accommodation_id's, name, city, country]
- **Retrieve all available accommodations [GET]**
    - i. Input: start_date, end_date, city, country, n_persons
    - ii. Output: accommodation_id's (tuple)

pricing-service

This service takes in a set of dates and accommodations and returns these accommodation id's and corresponding prices.

- **Retrieve prices [GET]**
    - i. Input:start-date, end-date, (available) accommodation_id's
    - ii. Output: accommodation_id's (tuple), prices (tuple)

ranking-service

Per accommodation ID, the ranking information is retrieved from the database (commission paid, review score, amount of bookings) and combined with the price for the accommodation. Then, the accommodation ids are ranked based on the price (Low-High), commission paid (H-L), review score (H-L) and amount of bookings (H-L).

- **Sort results [GET]**
    - i. Input: (available) accommodation_id's, prices
    - ii. Output: (available) accommodation_id's, prices, review_scores

query-display-service

Using the accommodation ids, the accommodation information is retrieved from the database and merged with the price and review score per accommodation.

- **Show query results [GET]**
    - i. Input: (available) accommodation_id's, prices, review_scores [GET]
    - ii. Output: (Accommodation) Name, City, Country, Price P.P, Review Score

Booking placement/refund etc. part

booking-service

The booking service has some methods to place and view bookings and details. Also you can cancel your booking and get a refund and see the refund status.

- **Place Booking [POST]**
  - i. Input: accommodation_id, user_id, start_date, end_date, total_amount
  - ii. Output: message (confirmation)
- **Show my bookings [GET]**
  - i. Input: userid
  - ii. Output: array[booking_id, hotel_name, start_date, end_date]
- **Show booking details [GET]**
  - i. Input: bookingid
  - ii. Output: booking_id, hotel_name, city, country, start_date, end_date, paid, refunded, total_amount
- **Place refund (cancel booking) [PUT]**
  - i. Input: bookingid
  - ii. Output: Confirmation or rejection (message)
- **Show refund-status [GET]**
  - i. Input: refundid
  - ii. Output: refund_id, booking_id, amount (paid), expected_refund_time, status