

To: Virgil Bistriceanu

From: Oleksandr Lemeha

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Subject: RESTful API Buy Nothing Project

Status of the project:

The project is complete.

The requirements for the APIs are all implemented but there are about 50 tests that still do not pass the automated Postman tests.

Link to Git Repository: https://github.com/olemeha/CS445_Project.git

Lines of Code: *about 2,335 lines*

Lines of Code in Unit Tests: *about 785 lines*

Unit Test Coverage: *91.1%*



Element	Coverage	Covered Instructions	Missed Instructions	Total Instructions
> BuyNothingProject	91.1 %	4,997	487	5,484

Number of Hours needed to get the code working: *about 40 hours*

Number of Hours I spent preparing my submission: *about 4 hours*

List of Challenges:

- There were challenges in getting the BuyNothingApplication to launch with spring boot and connect to my server. Specifically, I was not able to launch the database where all the requests would go.
 - I fixed this problem by making an embedded database that is launched with the application using spring boot.

```
..5
..4 #config for embedd db, comment there if you want to use sql
..5 spring.datasource.url=jdbc:h2:mem:testdb
..6 spring.datasource.driverClassName=org.h2.Driver
..7 spring.datasource.username=sa
..8 spring.datasource.password=password
..9 spring.jpa.database-platform=org.hibernate.dialect.H2Dialect
!0
```
 - Since the spring boot plugin automatically launches tomcat and its server, I can launch the application more easily than I would have to do if I had to turn on tomcat and mysql myself.

- There was a challenge in how to grab ID's from the requests so that I could validate existing account based on the user ID, give ID, etc., or activate account with the use of ID's.
 - I fixed this problem by making query repository interfaces for Account, Ask, Give, Note, and Thanks, which would select the required id from the database and send it to the request.
- I also had a challenge in creating the unit tests because I needed to test the restservice and basic unit tests were not working.
 - I ended up looking at some videos and tutorials on how to write springboot unit tests so that I could test the rest APIs. I was able to successfully build the unit tests using MockMvcRequestBuilders.