PROG32758 Midterm Practical (out of 60)

This is to be done individually and is subject to the school Policy and Guidelines on Academic Honesty.

- **You can use resources from slate, Baeldung, Spring.io and Oracle ONLY.**

- **No other website/application/forum/chat/discord etc. are allowed**

- **You must complete and upload your solution within 2 hours after opening the pdf.**

- **Accommodated students: your time is being accommodated according to your accommodations.**

In this part of the exam you will create a simple web application.

You must follow the directions in creating your project. **Serious marks will be deducted if not**!

- You must name your project *firstname-lastname-midterm*, where you use your name. So, for example my project would be *ali-mahboob-midterm.*
- You must name the parent package ca.firstname_lastname, where you use your name. So, for example my root package would be *ca.ali_mahboob*
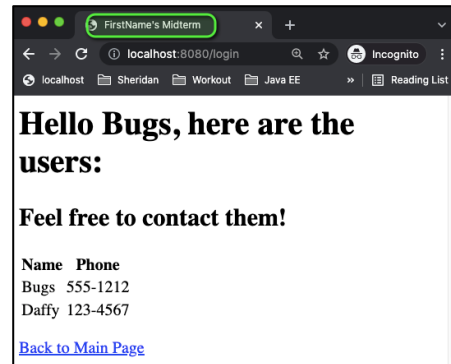
Not using your names instead of the placeholders will result in serious marks being deducted.
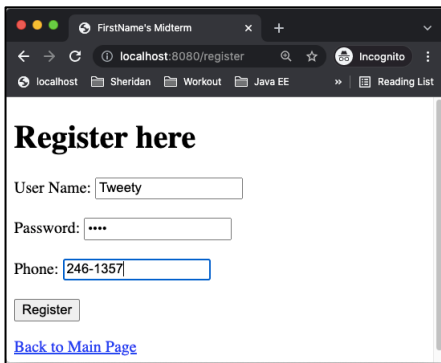
- Make sure you add the required dependencies as well
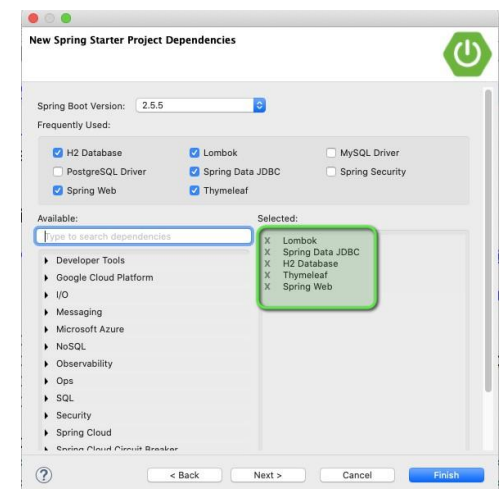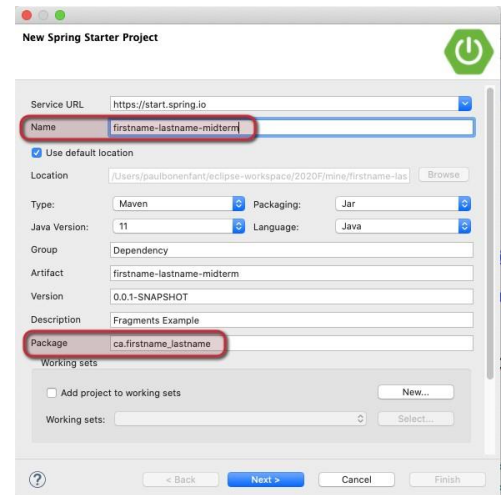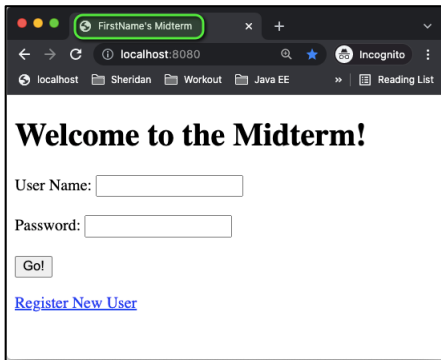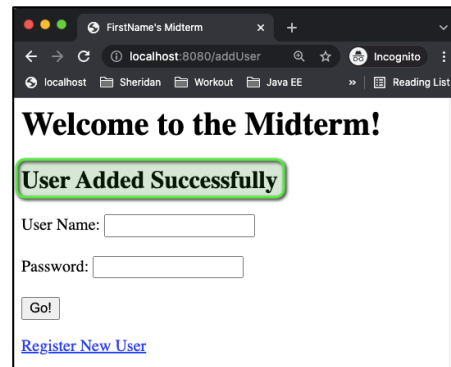
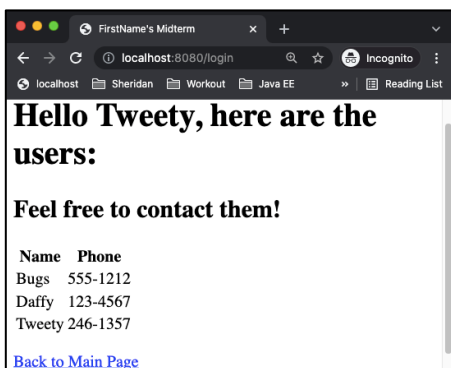index.html. Use your first name in all titles!
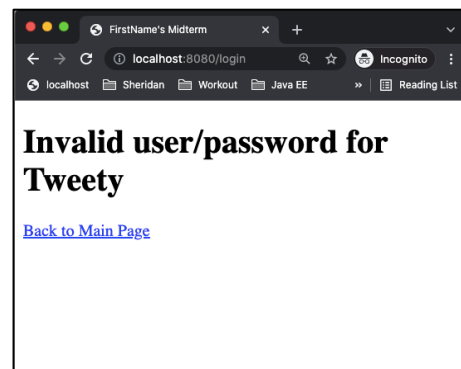

welcome.html after logging in as Bugs

register.html (use form binding)

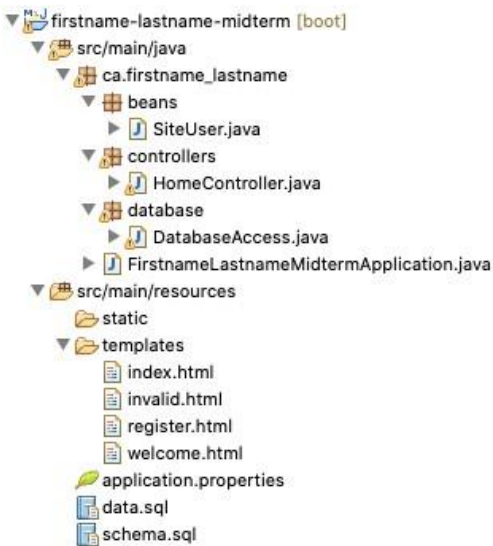Back to index after Register with a message

Logging on as newly created user Tweety. Tweety is now also in the database.

Invalid user Name and/or password. Wrong password was entered here. (Hint: a method can have more than one return statement)

- You should create a Spring Boot application with Spring Web, Thymeleaf, Lombok, H2 Database and JDBC SQL dependencies.
- Make sure you use your own name when setting up the project!
- You must use the following; o Best practices as taught in class for database access (using H2):
  - NamedParameterJdbcTemplate
  - MapSqlParameterSource
  - BeanPropertyRowMapper
  - o Thymeleaf in all dynamic pages and *Form Binding* in the Register User page. o Appropriate http methods handled in the controller class
  - o Your application should not crash if user does not enter values (hint: required!)

- You do not have to add commenting to your code, but you may decide to put some if you are having difficulties and want to explain (for possible partial marks)

Your project should have a structure very similar to the following. *Make sure you have your first name and last name instead of the placeholders! Serious marks deducted if not.*

```
▼ firstname-lastname-midterm [boot]
  ▼ src/main/java
    ▼ ca.firstname_lastname
      ▼ beans
        ▶ SiteUser.java
      ▼ controllers
        ▶ HomeController.java
      ▼ database
        ▶ DatabaseAccess.java
      ▶ FirstnameLastnameMidtermApplication.java
  ▼ src/main/resources
    static
    ▼ templates
      index.html
      invalid.html
      register.html
      welcome.html
    application.properties
    data.sql
    schema.sql
```

```sql
1  INSERT INTO users
2      (name, password, phone)
3  VALUES
4      ('Bugs', 'Bunny', '555-1212'),
5      ('Daffy', 'Duck', '123-4567');
```

```sql
1  CREATE TABLE users (
2      id LONG PRIMARY KEY AUTO_INCREMENT,
3      name VARCHAR(50),
4      password VARCHAR(50),
5      phone VARCHAR(50)
6  );
```

Submission Criterion
- Submit your *zipped* eclipse project (*not* rar or 7zip; marks will be deducted!)
- Make sure you also look at the rubric!

Good Luck!