DALHOUSIE UNIVERSITY

CSCI 3130 - Software Engineering

Project Deliverable-1 Instructions

TA:
Shathish Annamalai sh495601@dal.ca

Professor:
Dr. Tushar Sharma

Spring boot Starter Project:

Step 1: Make sure you have an ide preferably IntelliJ and java installed. I am using java version 17 you can use the latest version but choose the one present in spring initialize website. Open the Spring initializr using the url: Spring Initializr.

Step 2: Provide the values as seen in figure 1. You need to choose the java version that is present in your system or your IDE. You can find your java version by following the instructions provided Here.

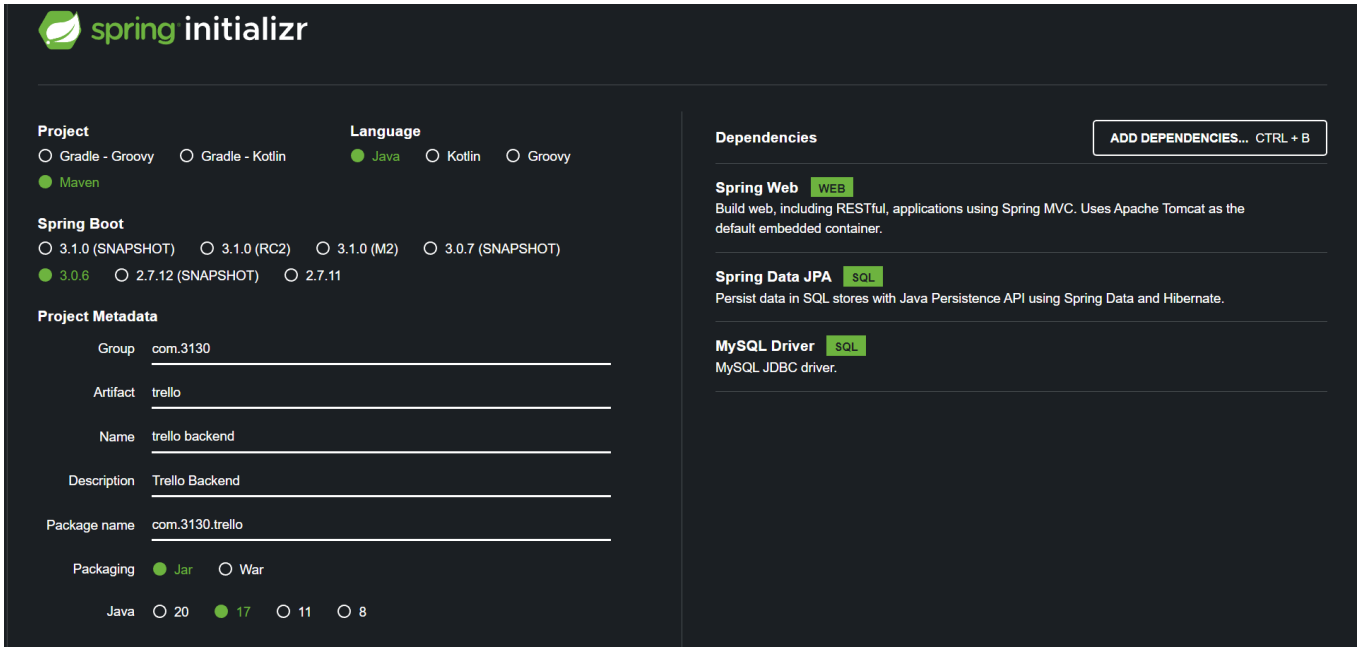

Figure 1 Project Creation using Spring Intitializr

Step 3: Add the following dependencies shown in the screenshot. Spring web (For the backend server), Spring Data JPA (For ORM), Mysql Driver (driver to connect to MySql).

Step 4: After providing the necessary details click on generate and download the project in zipped format. Extract in your PC location of your choice but remember the location where you extracted.

Step 5: Open IntelliJ and click on Open when the initial windows appear.

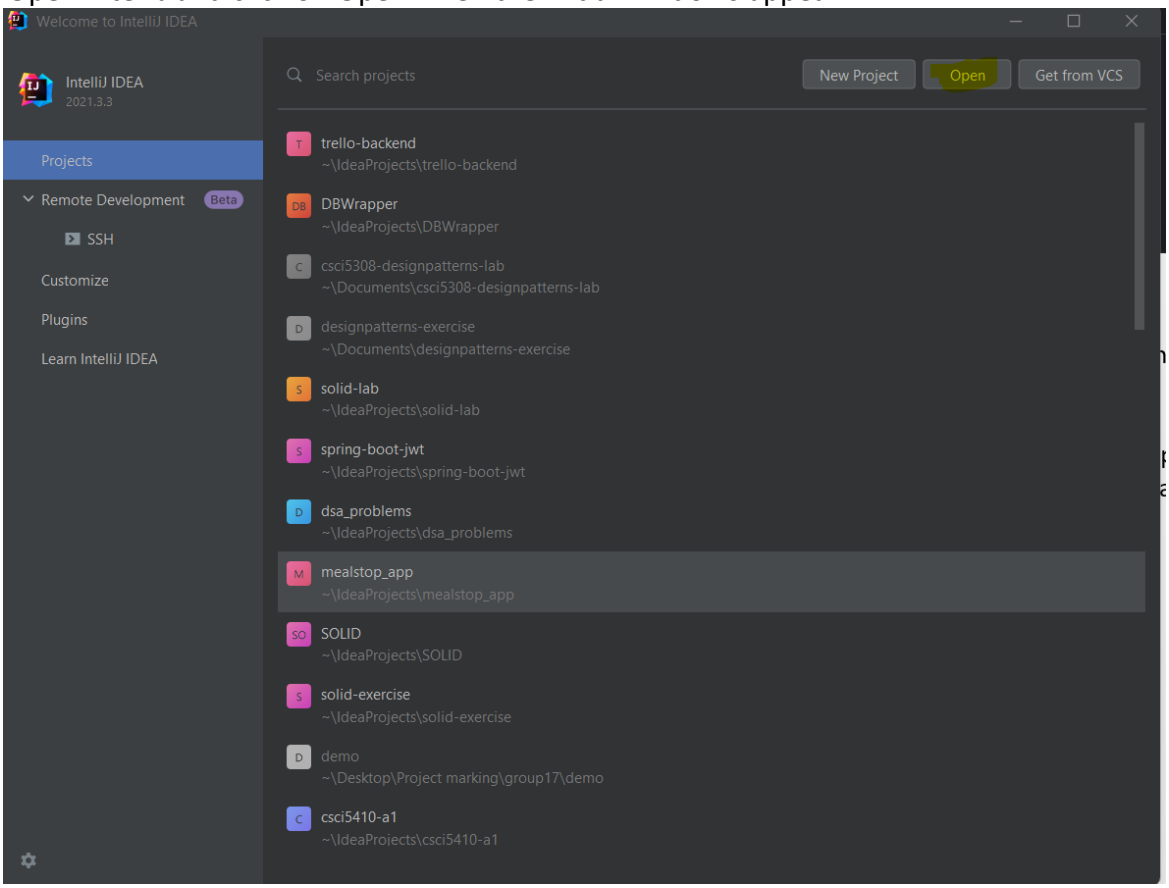

Figure 2 Intellij Start screen

Step 6: Choose the project which you had extracted from the downloaded zip file. Once the project opens IntelliJ will parse the Pom.XML and download the required dependencies, let it run and wait for it to finish. You can check the status on the right bottom.

Step 7: Go to src->main->resources->application. Properties to provide database connection details. If you have received the dal database details, you can provide it here or you can run MySQL Locally and provide the details. To run MySQL locally follow the instructions here. Provide the following values in the application. Properties file.

```
# Database properties
spring.jpa.hibernate.ddl-auto=update
spring.datasource.url=jdbc:mysql://${MYSQL_HOST:localhost}:3306/test_db
spring.datasource.username=root
spring.datasource.password=root
```

Here the test_db is the schema that is already present in my database. You need to provide a schema that is present in your database. If not create a schema first and provide it. Provide your username and password for the database. If you want to use the dal database, you need to change the localhost to the ip of the dal database server and update the schema name, username and password.

Step 8: right click on src->main->java->TrelloBackendApplication.java and click run as and choose springboot application.

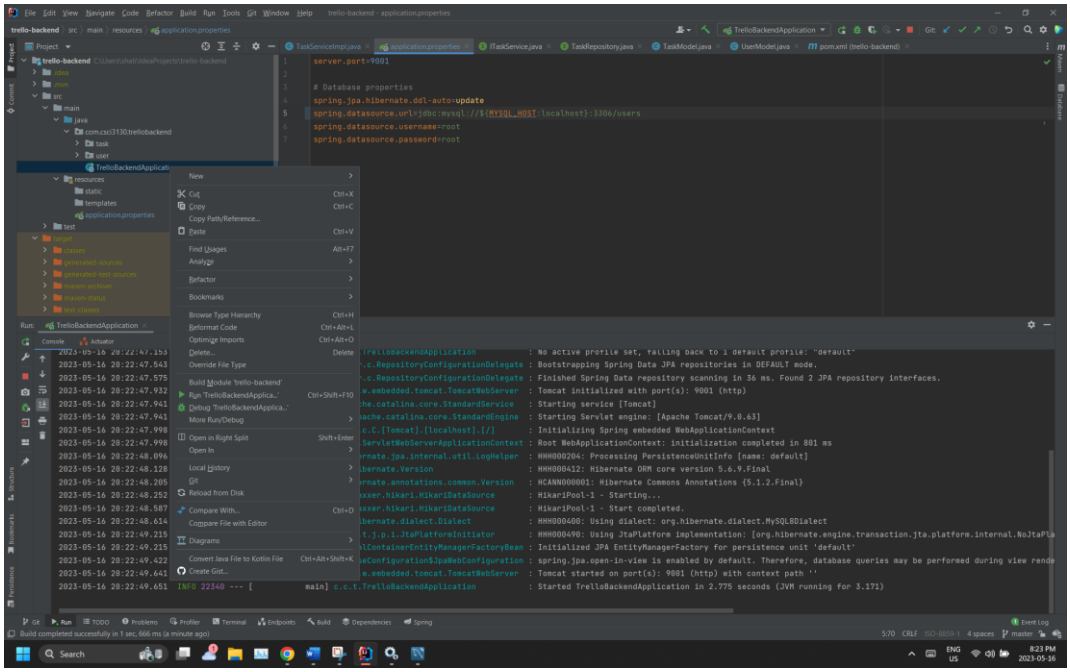

Figure 3 Run as Spring boot project

Step 9: If your java version and database properties are configured properly. Your application should start correctly, and you should get the following log output.

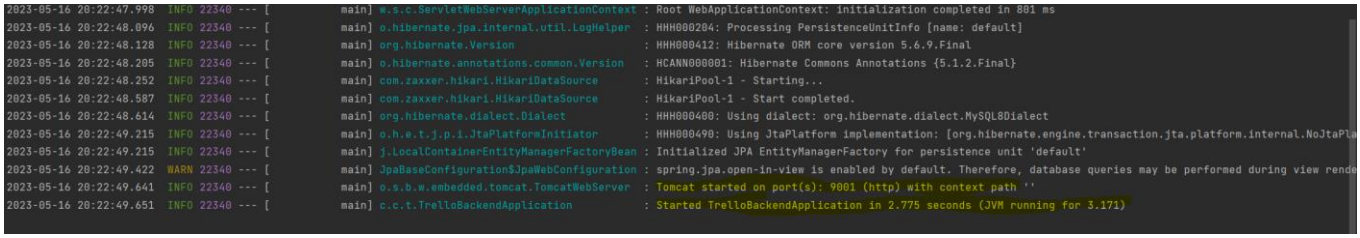

Figure 4 Successful log of spring boot application.

React JS Starter Project:

Step 1: Download and install Node.js for your corresponding operating system. Follow the instructions provided here.

Step 2: After installation execute the following command in your terminal or command prompt to verify that the Node.js is installed successfully. “node --version”

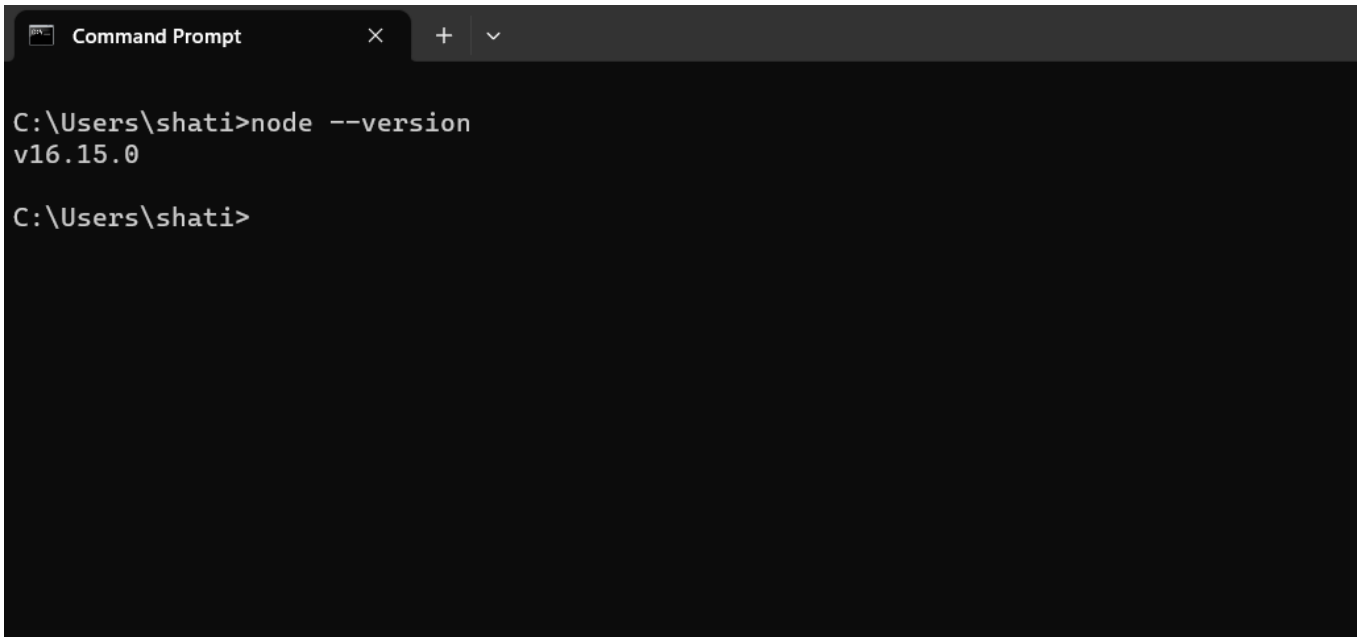

Figure 5 Node successful Installation confirmation

Step 3: Once the node.js is installed then go to the folder where you want to create your react project. Its better to create it in the folder where you have your backend application as well. The reason is you can manage both front end and backend in the same git repository.

Step 4: Once you are in the location where your backend application exists execute the following command “npx create-react-app trello-frontend”. As you can see from the below screenshot the Trello folder is my springboot backend project and the node js has created a new folder trello-frontend for the react project. If you create a git repository in this location where both frontend and backend project is present you can manage them both in a single repository.

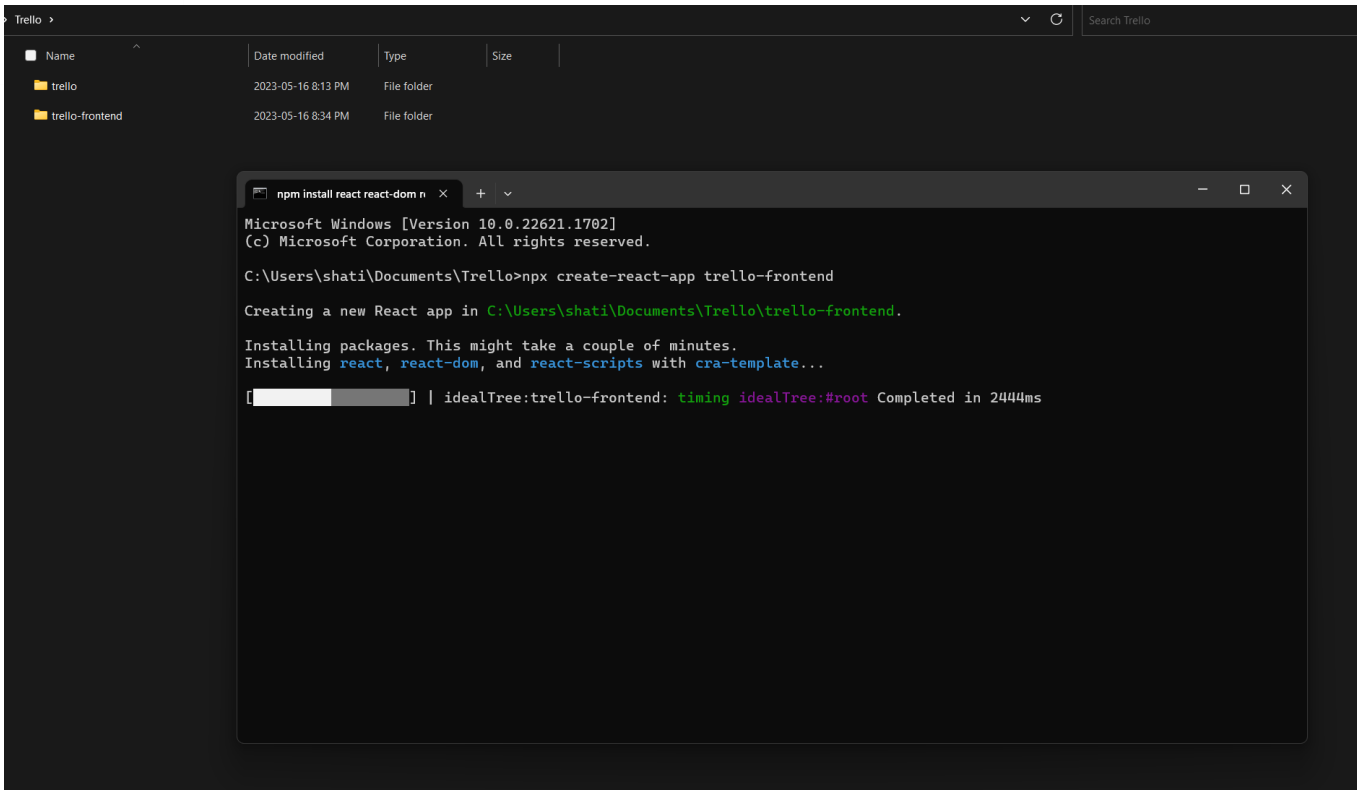

Figure 6 create new react js project.

Step 5: Once the project creating is done go to the created project folder “cd trello-frontend”. And issue the command “npm start” to start the react JS project. This will take some time to compile and start the application. Your terminal will provide you the URL of the running react project.

```
C:\Users\shati\Documents\Trello>cd trello-frontend

C:\Users\shati\Documents\Trello\trello-frontend>npm start

> trello-frontend@0.1.0 start
> react-scripts start

(node:9520) [DEP_WEBPACK_DEV_SERVER_ON_AFTER_SETUP_MIDDLEWARE] DeprecationWarning: 'onAfterSetupMiddleware' option is de
precated. Please use the 'setupMiddlewares' option.
(Use `node --trace-deprecation ...` to show where the warning was created)
(node:9520) [DEP_WEBPACK_DEV_SERVER_ON_BEFORE_SETUP_MIDDLEWARE] DeprecationWarning: 'onBeforeSetupMiddleware' option is
deprecated. Please use the 'setupMiddlewares' option.
Starting the development server...
Compiled successfully!

You can now view trello-frontend in the browser.

  Local:            http://localhost:3000
  On Your Network:  http://10.0.0.160:3000

Note that the development build is not optimized.
To create a production build, use npm run build.

webpack compiled successfully
```

Figure 7 Successful compilation of react project.

Step6: now your project must have opened in your default browser if not copy the link in the terminal http://localhost:3000 and paste in your browser. Your URL might be different so take it from the terminal.

Step 7: You should successfully see this starter page. You can commit both the frontend and backend files to your project repository. You will receive instructions on how to commit and push changes to your project repository in the lab session for git.

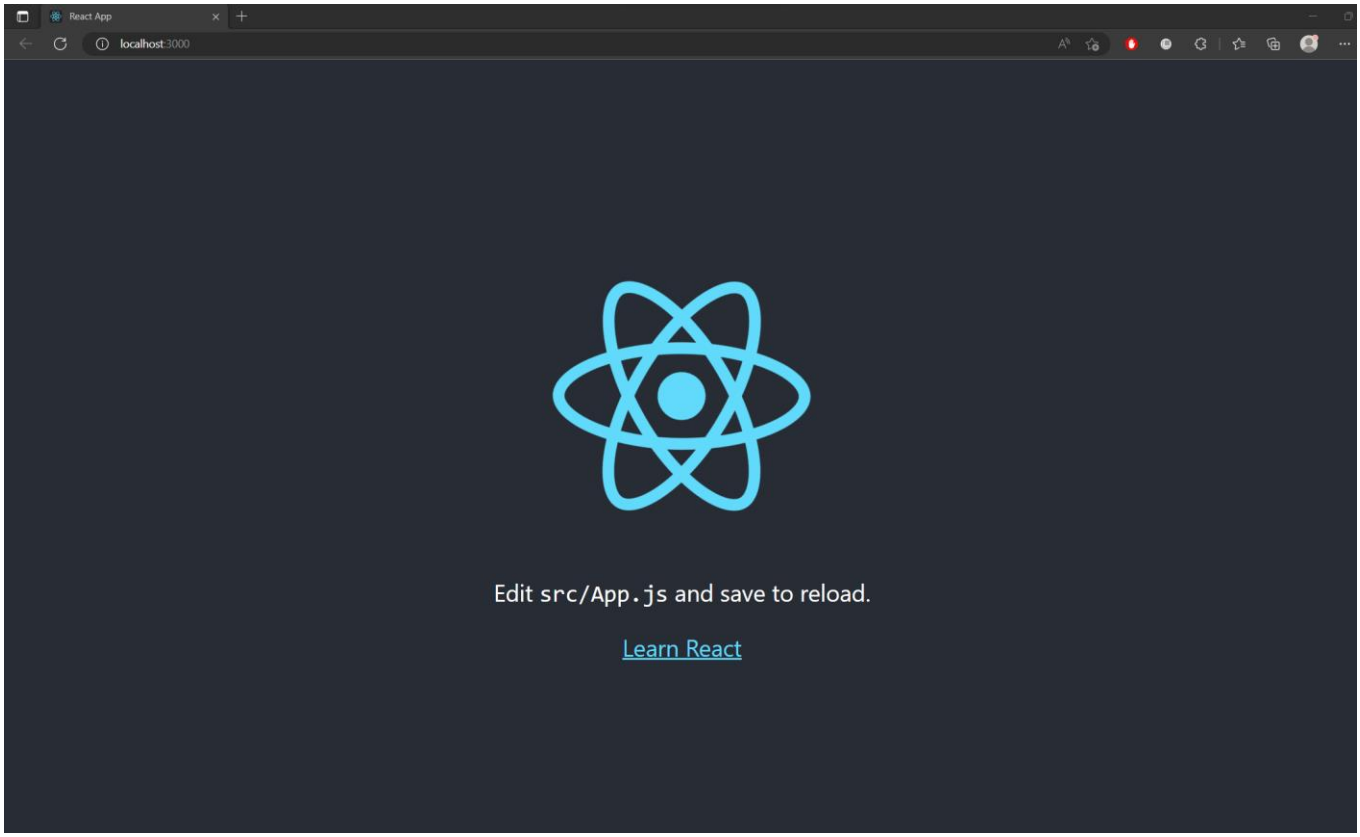

Figure 8 Successfully tunning react project.

Useful Resources:

1.) Installing Java on any OS
2.) Installing Intelli J
3.) Installing MySQL
4.) Installing Node JS
5.) Ask any questions related to setting up project in the teams general channel for detailed instructions from one of the TA.