SWE 642
Assignment 3

By:

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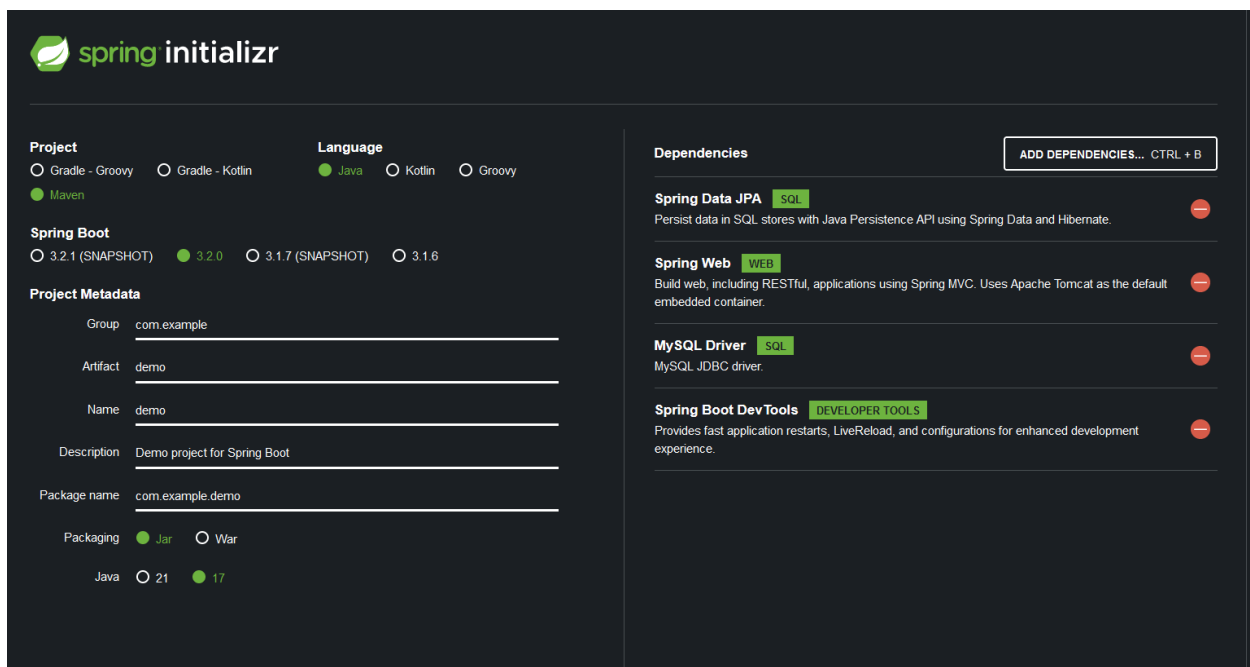Keerthan Srinivas: G01386121
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Step 1: Creating the spring boot project using spring boot initializer

- Go to the [spring initializer](#) website and start a new project.
- Under the Project select "**Maven**".
- Under Spring Boot version select "**3.2.0**".
- In the Project Metadata provide the necessary information.
- For Packaging select **Jar** and for **JAVA** version select "**17**".
- And add the following dependencies:
    - Spring Data JPA
    - Spring Web
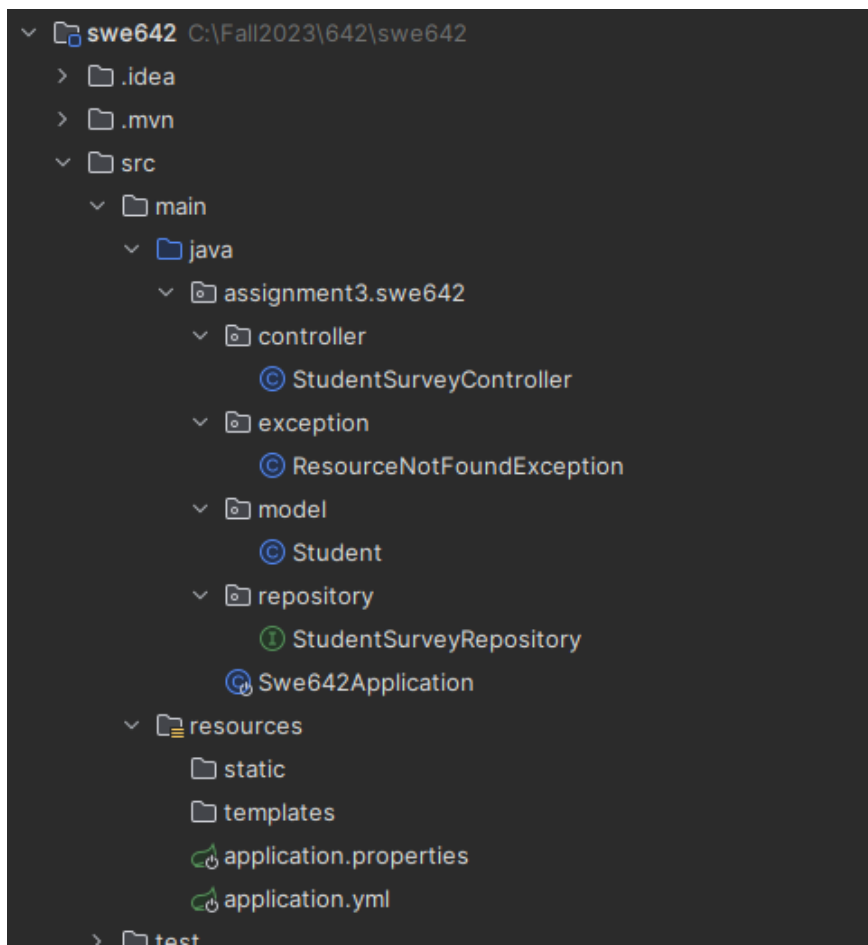   - MySQL Driver
    - Spring Boot Dev Tools

Step 2: Setting up the Spring Boot Application.

- Create four packages under the "src/main/java" folder.
- Namely:
    - Controller
    - ResourceException
    - Entity
    - Repository
- The controller is the primary component of the backend which directs all frontend calls to their respective backend functions.
- The ResourceException package is for handling errors that occur in the backend.
- Entity package is the primary component that holds the student information.

- I replaced the application.properties file with an application.yml file.
- The structure of the application.yml file should look like this.

```yaml
spring:
  datasource:
    driver-class-name: com.mysql.cj.jdbc.Driver
    url: jdbc:mysql://${DB_HOST:localhost}:${DB_PORT:3306}/${DB_NAME:mysurveys}
    username: ${DB_USERNAME:root}
    password: ${DB_PASSWORD:root123}
    hikari:
      initialization-fail-timeout: 0
  jpa:
    database-platform: org.hibernate.dialect.MySQLDialect
    hibernate:
      ddl-auto: update
    generate-ddl: true
    show-sql: true
```

Step 3: Installing NodeJS and Angular.

- First, we will install NodeJS from the following site.
- After installation, we can check if installation occurred successfully by using the command:
    - node -v
- Installing NodeJS automatically installs npm as well, we can check this installation as well using the command:
    - npm -v
- To install Angular we need to open the command prompt/terminal and type in the following command:
    - npm install -g @angular/cli
- We can check for the angular installation using
    - ng version

```
C:\Users\endso>node -v
v20.9.0

C:\Users\endso>npm -v
10.1.0

C:\Users\endso>ng version


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Angular CLI: 17.0.1
Node: 20.9.0
Package Manager: npm 10.1.0
OS: win32 x64

Angular:
...

Package                         Version
------------------------------------------------------
@angular-devkit/architect       0.1700.1 (cli-only)
@angular-devkit/core            17.0.1 (cli-only)
@angular-devkit/schematics      17.0.1 (cli-only)
@schematics/angular             17.0.1 (cli-only)
```

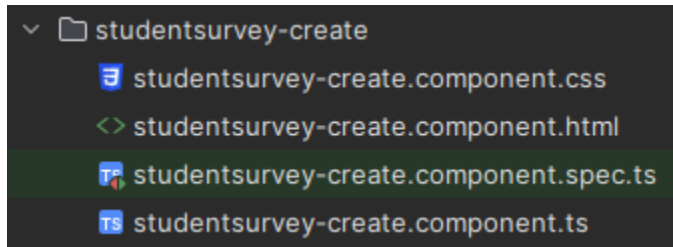## Step 4: Creating a new Angular project and setting up the frontend.

- To create a new Angular project use the command:
  - ng new <app-name>
- After creating the new project, we cd into the app and install bootstrap, to do this we use the following command.
  - npm install bootstrap –save
- We can see that bootstrap package is installed in package.json file

```
"@angular/router": "^17.0.0",
"bootstrap": "^5.3.2",
```
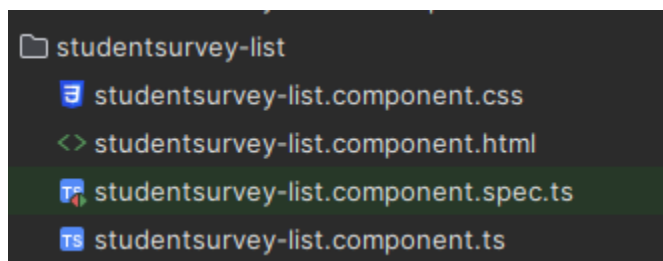
- Once, bootstrap package is successfully installed need to enable it in our project by adding bootstrap to styles in angular.json

```
"styles": [
  "./node_modules/bootstrap/dist/css/bootstrap.css",
  "src/styles.css"
```
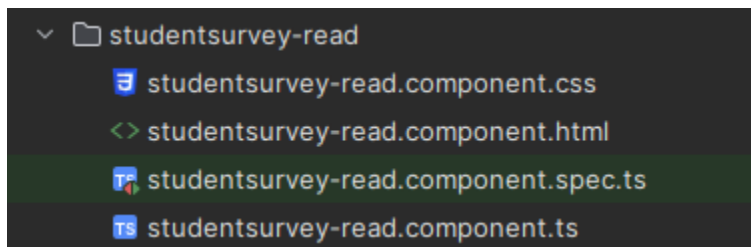
- Then we create four components using the command
  - ng g c <component-name>
- We also need to create a new service using the command
  - ng g s <service-name>
- We also need to create a class similar to an entity in the spring boot application
  - ng g class <class-name>
- One component is for creating a new survey

```
> ⌄ 🗀 studentsurvey-create
      ⧉ studentsurvey-create.component.css
      <> studentsurvey-create.component.html
      ⧉ studentsurvey-create.component.spec.ts
      ⧉ studentsurvey-create.component.ts
```

- Another component for listing the surveys

```
🗀 studentsurvey-list
    ⧉ studentsurvey-list.component.css
    <> studentsurvey-list.component.html
    ⧉ studentsurvey-list.component.spec.ts
    ⧉ studentsurvey-list.component.ts
```

- Another component reading the surveys

```
> ⌄ 🗀 studentsurvey-read
      ⧉ studentsurvey-read.component.css
      <> studentsurvey-read.component.html
      ⧉ studentsurvey-read.component.spec.ts
      ⧉ studentsurvey-read.component.ts
```

- One final component for updating a survey

```
studentsurvey-update
    studentsurvey-update.component.css
    studentsurvey-update.component.html
    studentsurvey-update.component.spec.ts
    studentsurvey-update.component.ts
```
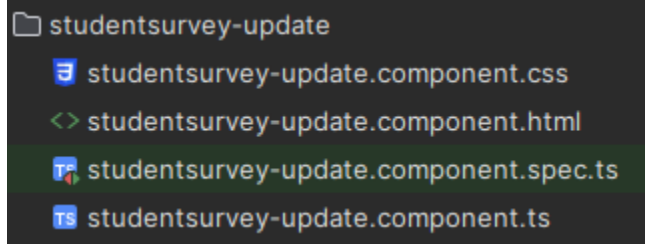
- The student class for storing information form the survey looks like this

```
export class Student {
  id: number;
  firstName: string;
  lastName: string;
  emailId: string;
  streetAddress: string;
  city: string;
  state: string;
  zipCode: number;
  telephone: string;
  mostLiked: string;
  interest: string;
  recommend: string;
  comment: string;
}
```

- After building the the angular app we can start the application using the command
  - ng serve

Code Github Links: https://github.com/ASDPKP/SWE642-Assignment3.git

Output Screenshots

Springboot Execution:

Angular Execution:

Homepage:

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Student Surveys

First Name	Last Name	Email ID	Street Address	City	State	Zip Code	Phone Number	Most Liked	Interest Reason	Recommend	Comments	Actions
Abishek	Daniel	abhisheksamuel0409@gmail.com	9419 Lee Hwy	Fairfax	Virginia	22031	5715671920	Sports	Friends	Likely	nothing	Update Delete View

New Survey:

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New Survey

First Name:

Last Name:

Email ID:

Street Address:

City:

State:

Zip Code:

Telephone:

What did you like most about the campus?

- ○ Students
- ○ Location
- ○ Campus
- ○ Atmosphere
- ○ Dorm Rooms
- ○ Sports

How did you get to know about our University?

- ○ Friends
- ○ Television
- ○ Internet
- ○ Others

How likely are you to recommned this University?

Any additional comments?

Submit

Update Survey:

Update Survey

First Name:

Abishek

Last Name:

Daniel

Email ID:

abhisheksamuel0409@gmail.com

Street Address:

9419 Lee Hwy

City:

Fairfax

State:

Virginia

Zip Code:

22031

Telephone:

5715671920

What did you like most about the campus?

○ Students
○ Location
○ Campus
○ Atmosphere
○ Dorm Rooms
● Sports

How did you get to know about our University?

● Friends
○ Television
○ Internet
○ Others

How likely are you to recommned this University?

Likely

Any additional comments?

nothing

Submit