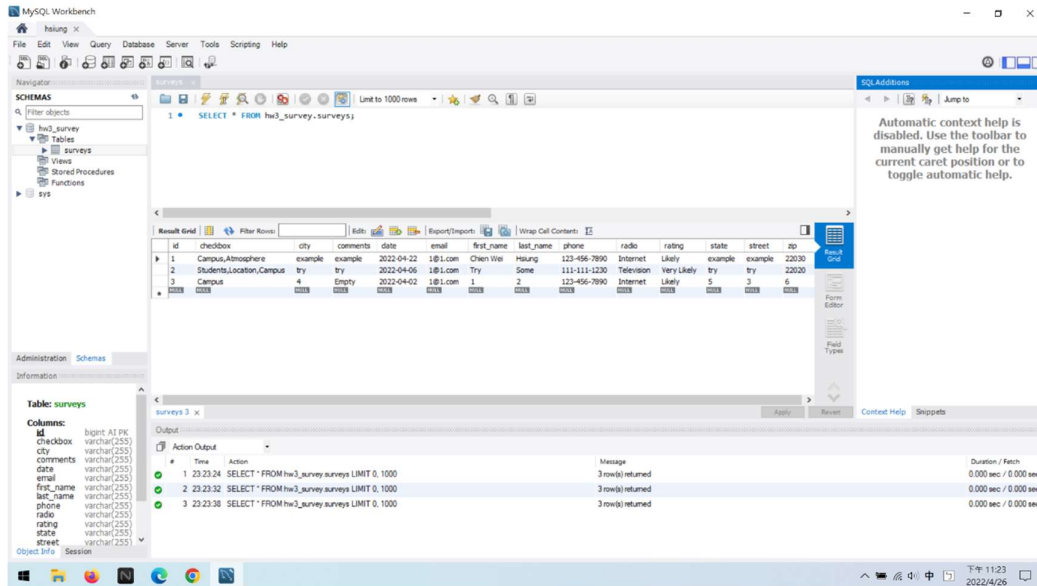


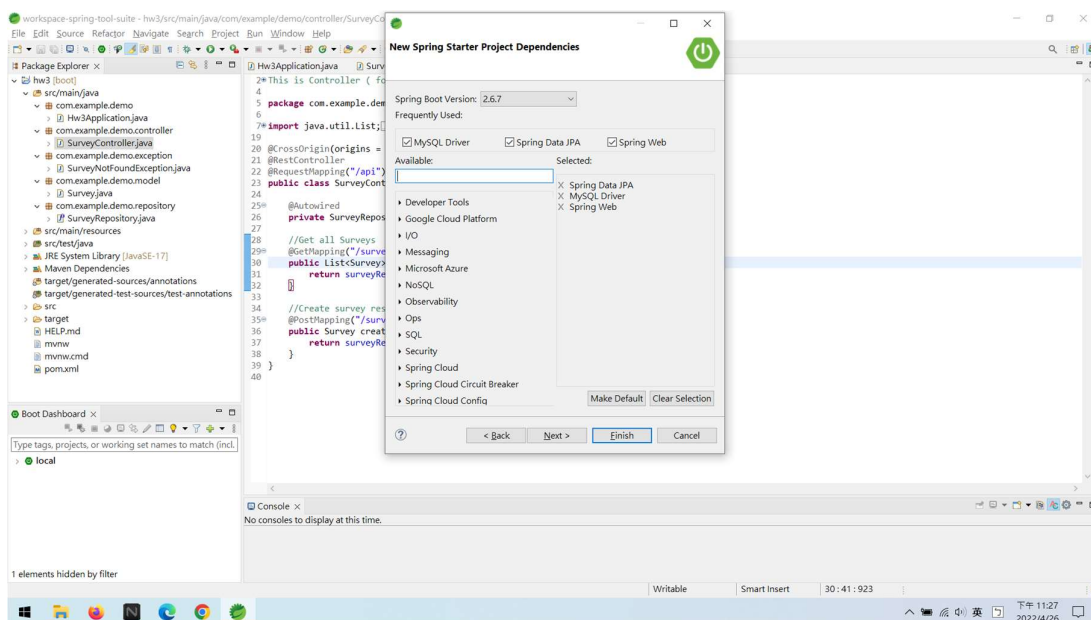
## 1. MySQL

- Create a database called “hw3\_survey” in MySQL

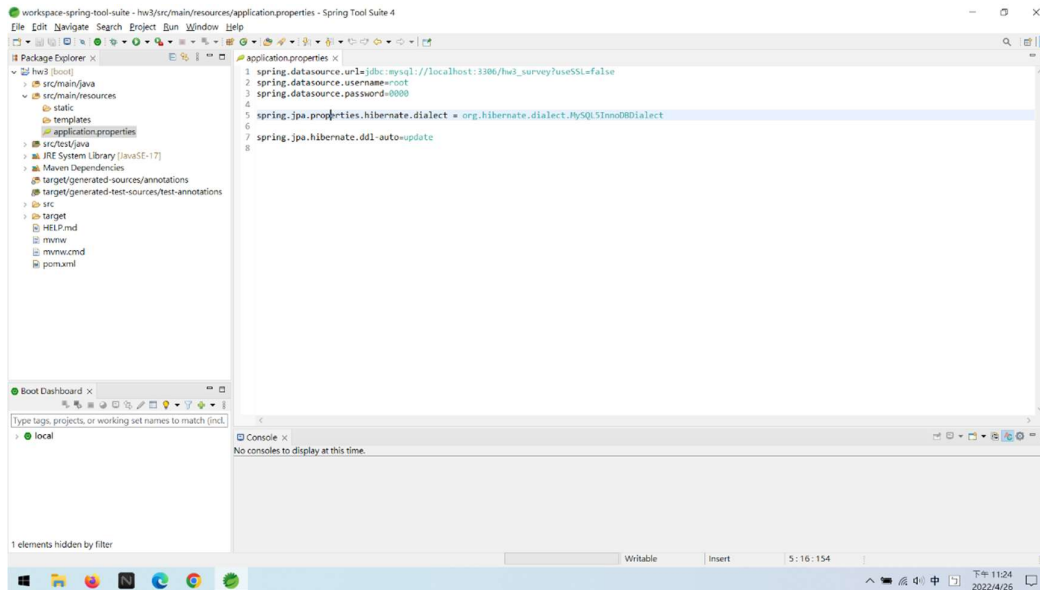


## 2. SpringBoot

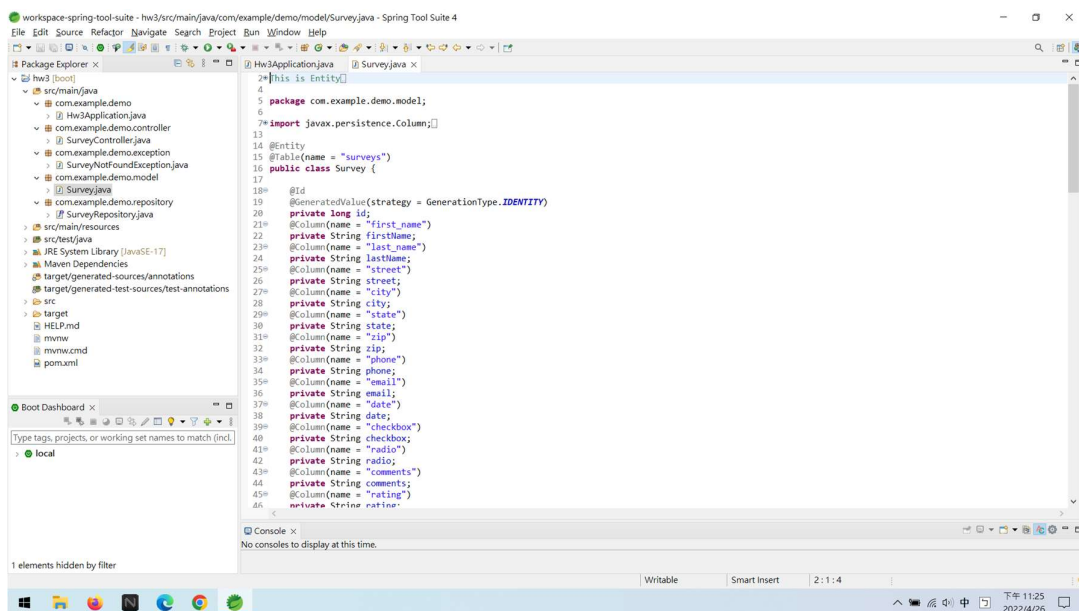
- Start a new project -> select dependencies : Spring Data JPA, MySQL Driver, Spring Web.



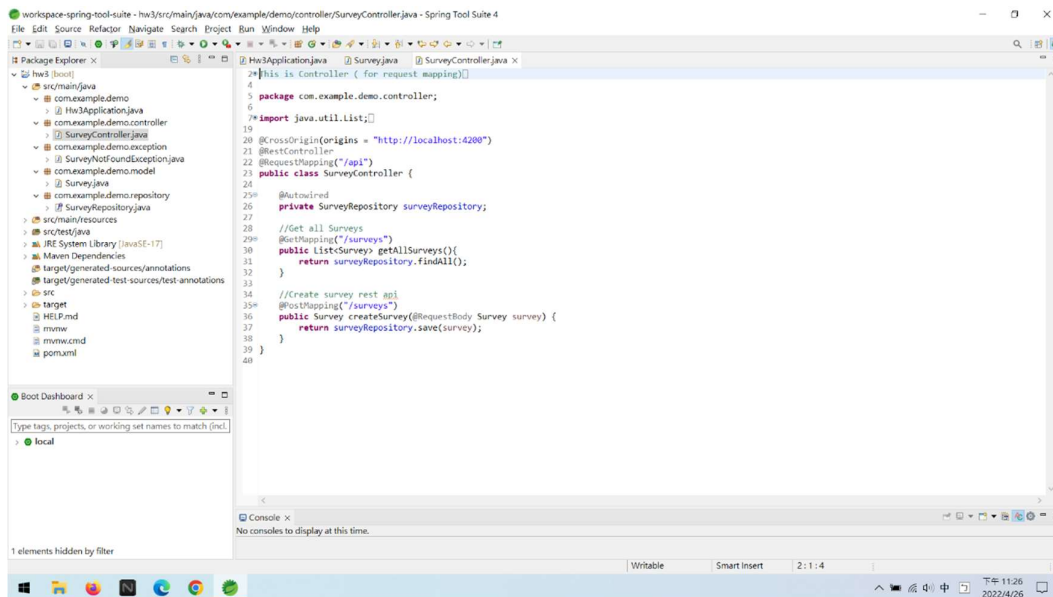
- Properties : contains the information to connect to the database shown in 1.



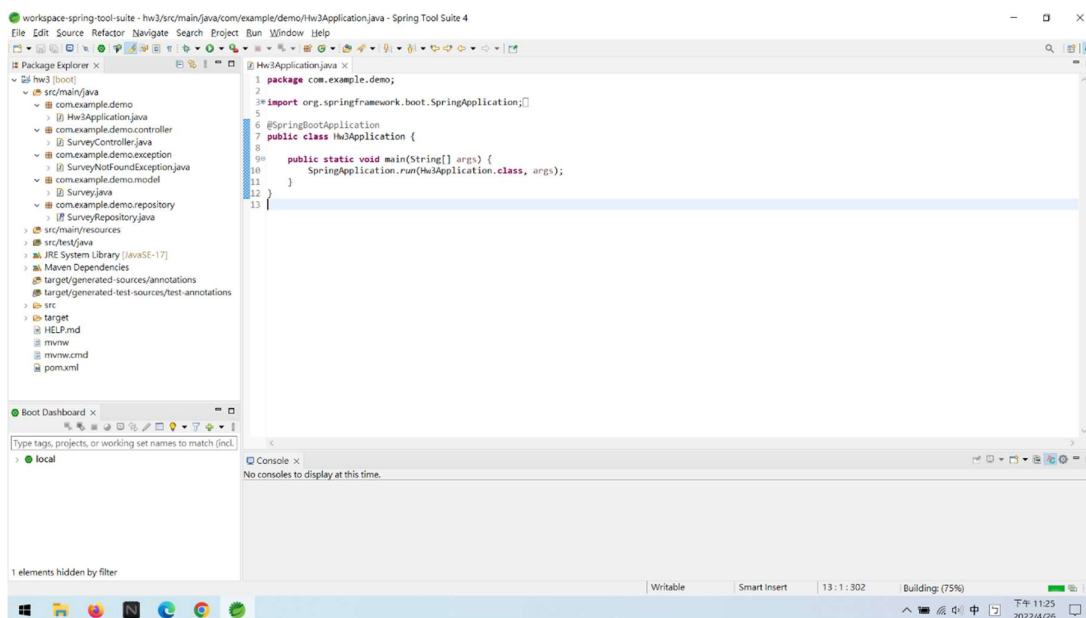
- Create a package : model -> Create a java class : this is used as the entity.



- Create a package : controller -> Create a java class : this is used for request mapping ( http get & post) .



- Create a package : exception -> Create a java class : this is used for exception.
- Create a package : repository -> Create a java class : this is used for repository.
- Then, right click on main class -> run as -> Spring Boot app



### 3. Angular

- Create a class : this is mapped to the entity above.

```
src > app > TS surveys > ...
1  /** Class ( map the entity in SpringBoot) */
2
3
4  export class Survey {
5
6      id: number | undefined;
7      firstName: string | undefined;
8      lastName: string | undefined;
9      streets: string | undefined;
10     city: string | undefined;
11     state: string | undefined;
12     zip: string | undefined;
13     phone: string | undefined;
14     email: string | undefined;
15     date: string | undefined;
16     checkboxes: string | undefined;
17     radio: string | undefined;
18     comments: string | undefined;
19     rating: string | undefined;
20 }
21
```

- Create a service : this includes HttpClient that can handle http request. This service is injected into list & survey components.

```
src > app > TS survey.service.ts > ...
1  /** Service : contains HttpClient and implements http get & post */
2
3
4
5  import { HttpClient } from '@angular/common/http';
6  import { Injectable } from '@angular/core';
7  import { Observable } from 'rxjs';
8  import { Survey } from './survey';
9
10 @Injectable({
11     providedIn: 'root'
12 })
13 export class SurveyService {
14
15     baseUrl: string = "http://localhost:8080/api/surveys";
16
17     constructor(private httpClient: HttpClient) { }
18
19     getSurveyList(): Observable<Survey[]>{
20         return this.httpClient.get<Survey[]>(`${this.baseUrl}`);
21     }
22
23     createSurvey(survey: Survey): Observable<any>{
24         return this.httpClient.post(`${this.baseUrl}`, survey);
25     }
26 }
27
```

- This file helps application route between components.

```
1 /** Routing between my components */
2
3 import { NgModule } from '@angular/core';
4 import { RouterModule, Routes } from '@angular/router';
5
6 //my component
7 import { SurveyComponent } from './survey/survey.component';
8 import { ListComponent } from './list/list.component';
9 import { HomeComponent } from './homepage/homepage.component';
10
11 const routes: Routes = [
12   {path:'survey', component: SurveyComponent },
13   {path:'list', component: ListComponent },
14   {path:'homepage', component: HomeComponent }
15 ];
16
17 @NgModule({
18   imports: [RouterModule.forRoot(routes)],
19   exports: [RouterModule]
20 })
21 export class AppRoutingModule { }
22 export const routingComponents = [SurveyComponent, ListComponent, HomeComponent]
23
```

- homepage component : contains two links to other components.

```
1 <!--
2   HomePage.html : two link to other components
3 -->
4 <div class="body">
5   <div class="heading">
6     <h1>HomePage</h1>
7   </div>
8
9   <div class="name">
10     <p>Chien Wei, Hsiung</p>
11   </div>
12
13   <div class="link">
14     <a routerLink="/survey">To Student Survey</a>
15   </div>
16   <br>
17   <div class="link">
18     <a routerLink="/list">To List</a>
19   </div>
20 </div>
```

- list component : http get request to backend application, and then display all the surveys on the browser.

The screenshot shows a Visual Studio Code editor with two files open: `list.component.html` and `list.component.ts`. The `list.component.html` file contains an Angular template for a survey list. It features a table with columns for personal and contact information, and a list of survey entries. The `list.component.ts` file shows the component class `ListComponent` which implements `OnInit`. It initializes an empty `surveys` array and uses `ngOnInit` to fetch data from `SurveyService` and update the `surveys` array.

```
src > app > list > list.component.html > div.body > table.styled-table > tbody > tr > td > <!-- Go to component -->
1 <!-- List html : show all the surveys in the form of table -->
2 -->
3
4 <div class="body">
5   <h2> Survey List</h2>
6
7   <table class = "styled-table">
8     <thead>
9       <tr>
10        <th>First Name</th>
11        <th>Last Name</th>
12        <th>Street</th>
13        <th>City</th>
14        <th>State</th>
15        <th>Zip</th>
16        <th>Phone</th>
17        <th>Email</th>
18        <th>Date</th>
19        <th>Checkbox</th>
20        <th>Radio</th>
21        <th>Comments</th>
22        <th>Rating</th>
23      </tr>
24    </thead>
25    <tbody>
26      <tr *ngFor = "let survey of surveys">
27        <td> {{survey.firstName}} </td>
28        <td> {{survey.lastName}} </td>
29        <td> {{survey.street}} </td>
30        <td> {{survey.city}} </td>
31      </tr>
32    </tbody>
33  </table>
34 </div>
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