

2021-2022

## Département Mathématiques et Informatique GLSID 2 – S4

### Architecture JEE et Middlewares

Rapport AP Etudiants  
Spring MVC Thymeleaf

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# Introduction

Ce tp consiste à créer une application Web JEE basée sur Spring MVC, Thymeleaf et Spring Data JPA qui permet de gérer les étudiants. L'application doit permettre les fonctionnalités suivantes :

- Afficher les étudiants
- Faire la pagination
- Chercher les étudiants
- Supprimer un étudiant
- Configurer l'authentification avec SpringSecurity
- Ajouter les rôles ADMIN et USER

## Réalisation

Dans le dossier entities on crée la classe Etudiant

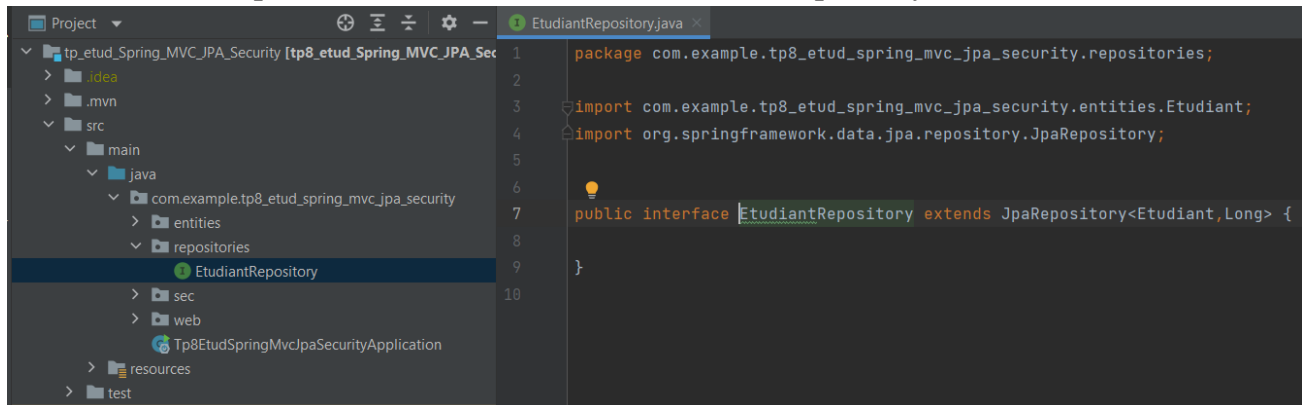
The screenshot shows an IDE with a project named 'tp8\_etud\_Spring\_MVC\_JPA\_Security'. The left sidebar displays the project structure, with the 'entities' folder under 'com.example.tp8\_etud\_spring\_mvc\_jpa\_security' selected. The main editor window shows the 'Etudiant.java' file. The code defines a JPA entity with the following attributes and annotations:

```
8 import javax.persistence.*;
9 import javax.validation.constraints.NotEmpty;
10 import javax.validation.constraints.Size;
11 import java.util.Date;
12
13 @Entity
14 @Data @NoArgsConstructor @AllArgsConstructor
15 public class Etudiant {
16     @Id
17     @GeneratedValue(strategy = GenerationType.IDENTITY)
18     private Long id;
19     @NotEmpty
20     @Size(min = 3, max = 40)
21     private String nom;
22     @Size(min = 3, max = 40)
23     private String prenom;
24     private String email;
25     @Temporal(TemporalType.DATE)
26     @DateTimeFormat(pattern = "yyyy-MM-dd")
27     private Date dateNaissance;
28     @Enumerated(EnumType.STRING)
29     private Genre genre;
30     private boolean enRegle;
31
32 }
```

The screenshot shows the same IDE with the 'Genre.java' file open in the main editor. The code defines an enumeration for gender with the following structure:

```
1 package com.example.tp8_etud_spring_mvc_jpa_security.entities;
2
3 public enum Genre {
4     FEMININ, MASCULIN
5 }
6
```

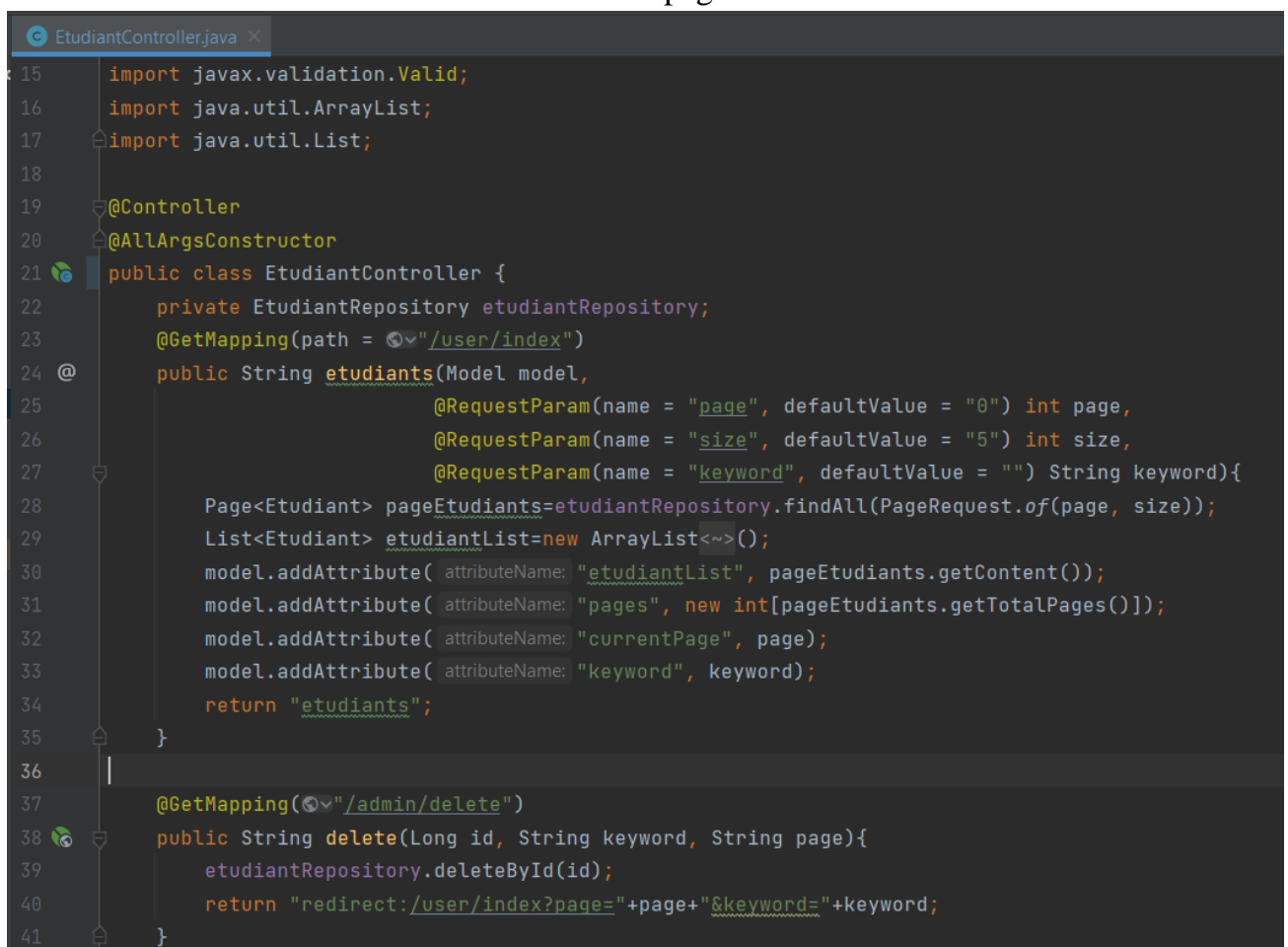
Dans le dossier repositories on crée l'interface EtudiantRepository



The screenshot shows an IDE with a project explorer on the left and a code editor on the right. The project explorer shows a project named 'tp\_etud\_spring\_mvc\_jpa\_security' with a package structure including 'repositories'. The 'EtudiantRepository' interface is highlighted in the project explorer. The code editor shows the following code:

```
1 package com.example.tp8_etud_spring_mvc_jpa_security.repositories;
2
3 import com.example.tp8_etud_spring_mvc_jpa_security.entities.Etudiant;
4 import org.springframework.data.jpa.repository.JpaRepository;
5
6
7 public interface EtudiantRepository extends JpaRepository<Etudiant, Long> {
8
9 }
10
```

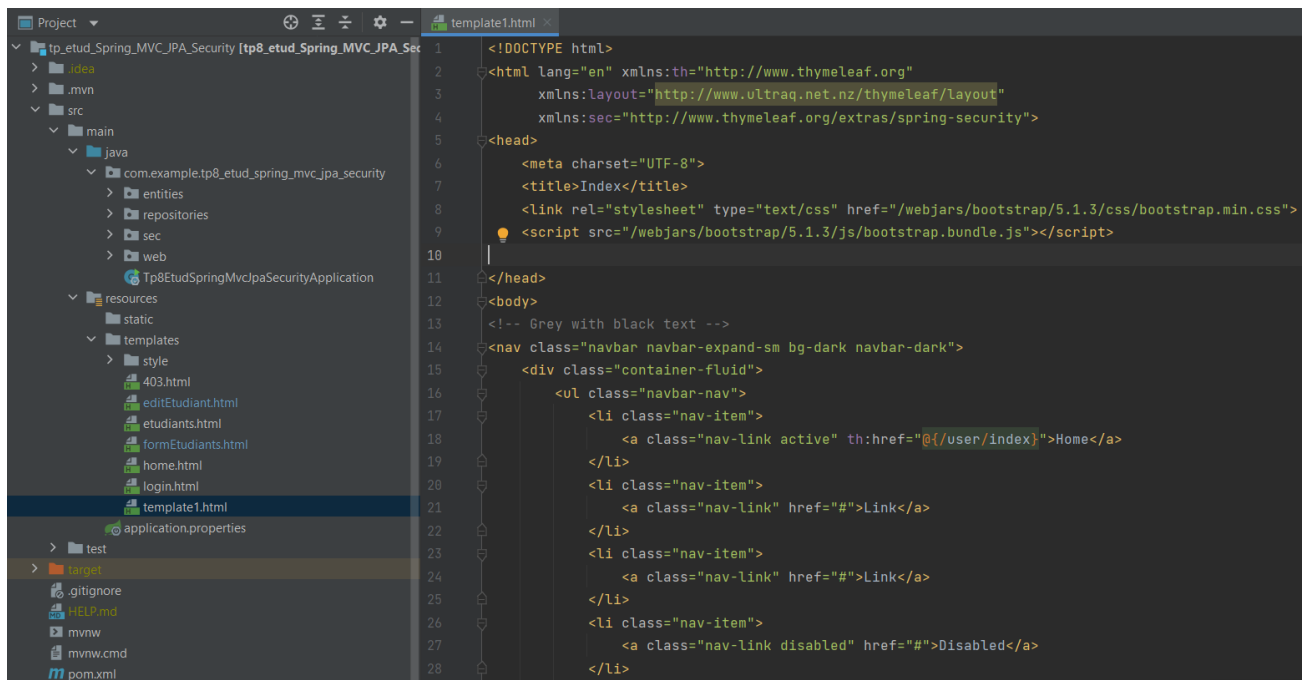
Dans le dossier web on crée le controleur de la page web EtudiantController



The screenshot shows an IDE with a code editor displaying the 'EtudiantController.java' file. The code is as follows:

```
15 import javax.validation.Valid;
16 import java.util.ArrayList;
17 import java.util.List;
18
19 @Controller
20 @AllArgsConstructor
21 public class EtudiantController {
22     private EtudiantRepository etudiantRepository;
23     @GetMapping(path = "/user/index")
24     @
25     public String etudiants(Model model,
26                             @RequestParam(name = "page", defaultValue = "0") int page,
27                             @RequestParam(name = "size", defaultValue = "5") int size,
28                             @RequestParam(name = "keyword", defaultValue = "") String keyword){
29         Page<Etudiant> pageEtudiants=etudiantRepository.findAll(PageRequest.of(page, size));
30         List<Etudiant> etudiantList=new ArrayList<>();
31         model.addAttribute( attributeName: "etudiantList", pageEtudiants.getContent());
32         model.addAttribute( attributeName: "pages", new int[pageEtudiants.getTotalPages()]);
33         model.addAttribute( attributeName: "currentPage", page);
34         model.addAttribute( attributeName: "keyword", keyword);
35         return "etudiants";
36     }
37
38     @GetMapping("/admin/delete")
39     public String delete(Long id, String keyword, String page){
40         etudiantRepository.deleteById(id);
41         return "redirect:/user/index?page="+page+"&keyword="+keyword;
42     }
43 }
```

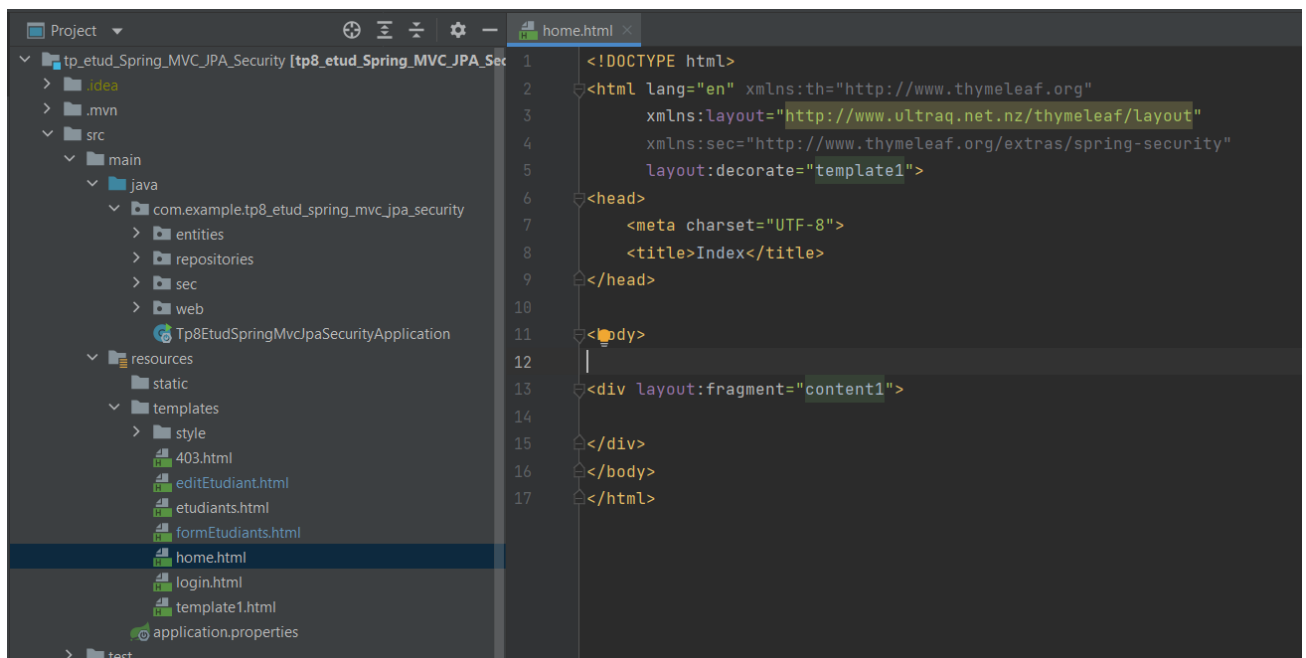
Sous le dossier ressource on crée un dossier template dans lequel on crée nos pages html  
template1.html



The screenshot shows an IDE with a project named 'tp8\_etud\_spring\_mvc\_jpa\_security'. The file explorer on the left shows the project structure, including a 'resources' folder with a 'templates' subfolder. The 'template1.html' file is selected in the 'templates' folder. The editor on the right displays the content of 'template1.html', which is a Thymeleaf template. It includes a DOCTYPE declaration, a head section with a meta charset, a title 'Index', and a link to a stylesheet. The body section contains a navigation bar with links to 'Home', 'Link', and 'Disabled'.

```
1 <!DOCTYPE html>
2 <html lang="en" xmlns:th="http://www.thymeleaf.org"
3   xmlns:layout="http://www.ultraq.net.nz/thymeleaf/layout"
4   xmlns:sec="http://www.thymeleaf.org/extras/spring-security">
5 <head>
6   <meta charset="UTF-8">
7   <title>Index</title>
8   <link rel="stylesheet" type="text/css" href="/webjars/bootstrap/5.1.3/css/bootstrap.min.css">
9   <script src="/webjars/bootstrap/5.1.3/js/bootstrap.bundle.js"></script>
10
11 </head>
12 <body>
13   <!-- Grey with black text -->
14   <nav class="navbar navbar-expand-sm bg-dark navbar-dark">
15     <div class="container-fluid">
16       <ul class="navbar-nav">
17         <li class="nav-item">
18           <a class="nav-link active" th:href="@{/user/index}">Home</a>
19         </li>
20         <li class="nav-item">
21           <a class="nav-link" href="#">Link</a>
22         </li>
23         <li class="nav-item">
24           <a class="nav-link" href="#">Link</a>
25         </li>
26         <li class="nav-item">
27           <a class="nav-link disabled" href="#">Disabled</a>
28         </li>
29       </ul>
30     </div>
31   </nav>
32 </body>
33 </html>
```

home.html



The screenshot shows the same IDE with the 'home.html' file selected in the 'templates' folder. The editor on the right displays the content of 'home.html', which is a Thymeleaf template. It includes a DOCTYPE declaration, a head section with a meta charset, a title 'Index', and a link to a stylesheet. The body section contains a div with the layout:fragment attribute set to 'content1'.

```
1 <!DOCTYPE html>
2 <html lang="en" xmlns:th="http://www.thymeleaf.org"
3   xmlns:layout="http://www.ultraq.net.nz/thymeleaf/layout"
4   xmlns:sec="http://www.thymeleaf.org/extras/spring-security"
5   layout:decorate="template1">
6 <head>
7   <meta charset="UTF-8">
8   <title>Index</title>
9   <link rel="stylesheet" type="text/css" href="/webjars/bootstrap/5.1.3/css/bootstrap.min.css">
10   <script src="/webjars/bootstrap/5.1.3/js/bootstrap.bundle.js"></script>
11 </head>
12 <body>
13   <div layout:fragment="content1">
14   </div>
15 </body>
16 </html>
```

## etudiants.html

```
Project
└─ tp_etud_Spring_MVC_JPA_Security [tp8_etud_Spring_MVC_JPA_Sec
  └─ src
    └─ main
      └─ java
        └─ com.example.tp8_etud_spring_mvc_jpa_security
          └─ Tp8EtudSpringMvcJpaSecurityApplication
            └─ resources
              └─ templates
                └─ style
                  └─ etudiants.html
                    1 <!DOCTYPE html>
                    2 <html lang="en" xmlns:th="http://www.thymeleaf.org"
                    3   xmlns:layout="http://www.ultraq.net.nz/thymeleaf/layout"
                    4   xmlns:sec="http://www.thymeleaf.org/extras/spring-security"
                    5   layout:decorate="template1">
                    6 <head>
                    7   <meta charset="UTF-8">
                    8   <title>Etudiants</title>
                    9   <link rel="stylesheet" href="/webjars/bootstrap/5.1.3/css/bootstrap.min.css">
                   10   <link rel="stylesheet" href="style/style.css">
                   11 </head>
                   12 <body>
                   13 <div layout:fragment="content1">
                   14   <div class="container mt-5">
                   15     <div class="card-header"><h3>Liste des étudiants</h3></div>
                   16     <div class="card-body mt-2">
                   17       <form method="get" th:action="@{/user/index}" class="mt-2">
                   18         <label>Key word</label>
                   19         <input type="text" name="keyword" th:value="${keyword}">
                   20         <button type="submit" class="btn btn-info">Chercher</button>
                   21       </form>
                   22       <table class="table mt-4">
                   23         <thead>
                   24           <tr style="background-color: #f2f2f2;">
                   25             <th>ID</th><th>Nom</th><th>Prénom</th><th>Email</th><th>Date</th><th>Genre</th><th>En r gle</th>
                   26           </tr>
                   27         </thead>
                   28         <tbody>
                   29           <tr>
                   30             <td>1</td><td>John</td><td>Doe</td><td>john.doe@example.com</td><td>2023-01-01</td><td>M</td><td>Oui</td>
                   31           </tr>
                   32           <tr>
                   33             <td>2</td><td>Jane</td><td>Smith</td><td>jane.smith@example.com</td><td>2023-02-15</td><td>F</td><td>Non</td>
                   34           </tr>
                   35           <tr>
                   36             <td>3</td><td>Michael</td><td>Johnson</td><td>michael.johnson@example.com</td><td>2023-03-10</td><td>M</td><td>Oui</td>
                   37           </tr>
                   38           <tr>
                   39             <td>4</td><td>Emily</td><td>Brown</td><td>emily.brown@example.com</td><td>2023-04-05</td><td>F</td><td>Non</td>
                   40           </tr>
                   41           <tr>
                   42             <td>5</td><td>David</td><td>Wilson</td><td>david.wilson@example.com</td><td>2023-05-20</td><td>M</td><td>Oui</td>
                   43           </tr>
                   44           <tr>
                   45             <td>6</td><td>Sophie</td><td>Martin</td><td>sophie.martin@example.com</td><td>2023-06-12</td><td>F</td><td>Non</td>
                   46           </tr>
                   47           <tr>
                   48             <td>7</td><td>Thomas</td><td>Peterson</td><td>thomas.peterson@example.com</td><td>2023-07-08</td><td>M</td><td>Oui</td>
                   49           </tr>
                   50           <tr>
                   51             <td>8</td><td>Olivia</td><td>Clark</td><td>olivia.clark@example.com</td><td>2023-08-03</td><td>F</td><td>Non</td>
                   52           </tr>
                   53           <tr>
                   54             <td>9</td><td>Daniel</td><td>Lewis</td><td>daniel.lewis@example.com</td><td>2023-09-18</td><td>M</td><td>Oui</td>
                   55           </tr>
                   56           <tr>
                   57             <td>10</td><td>Ava</td><td>Harris</td><td>ava.harris@example.com</td><td>2023-10-02</td><td>F</td><td>Non</td>
                   58           </tr>
                   59           <tr>
                   60             <td>11</td><td>Noah</td><td>Young</td><td>noah.young@example.com</td><td>2023-11-15</td><td>M</td><td>Oui</td>
                   61           </tr>
                   62           <tr>
                   63             <td>12</td><td>Isabella</td><td>King</td><td>isabella.king@example.com</td><td>2023-12-01</td><td>F</td><td>Non</td>
                   64           </tr>
                   65           <tr>
                   66             <td>13</td><td>Liam</td><td>Wright</td><td>liam.wright@example.com</td><td>2024-01-10</td><td>M</td><td>Oui</td>
                   67           </tr>
                   68           <tr>
                   69             <td>14</td><td>Mia</td><td>Scott</td><td>mia.scott@example.com</td><td>2024-02-05</td><td>F</td><td>Non</td>
                   70           </tr>
                   71           <tr>
                   72             <td>15</td><td>Ethan</td><td>Green</td><td>ethan.green@example.com</td><td>2024-03-20</td><td>M</td><td>Oui</td>
                   73           </tr>
                   74           <tr>
                   75             <td>16</td><td>Charlotte</td><td>Adams</td><td>charlotte.adams@example.com</td><td>2024-04-12</td><td>F</td><td>Non</td>
                   76           </tr>
                   77           <tr>
                   78             <td>17</td><td>Alexander</td><td>Baker</td><td>alexander.baker@example.com</td><td>2024-05-08</td><td>M</td><td>Oui</td>
                   79           </tr>
                   80           <tr>
                   81             <td>18</td><td>Amelia</td><td>Nelson</td><td>amelia.nelson@example.com</td><td>2024-06-03</td><td>F</td><td>Non</td>
                   82           </tr>
                   83           <tr>
                   84             <td>19</td><td>Benjamin</td><td>Hill</td><td>benjamin.hill@example.com</td><td>2024-07-18</td><td>M</td><td>Oui</td>
                   85           </tr>
                   86           <tr>
                   87             <td>20</td><td>Harper</td><td>Carter</td><td>harper.carter@example.com</td><td>2024-08-02</td><td>F</td><td>Non</td>
                   88           </tr>
                   89           <tr>
                   90             <td>21</td><td>Lucas</td><td>Evans</td><td>lucas.evans@example.com</td><td>2024-09-15</td><td>M</td><td>Oui</td>
                   91           </tr>
                   92           <tr>
                   93             <td>22</td><td>Evelyn</td><td>Parker</td><td>evelyn.parker@example.com</td><td>2024-10-01</td><td>F</td><td>Non</td>
                   94           </tr>
                   95           <tr>
                   96             <td>23</td><td>Gabriel</td><td>Roberts</td><td>gabriel.roberts@example.com</td><td>2024-11-10</td><td>M</td><td>Oui</td>
                   97           </tr>
                   98           <tr>
                   99             <td>24</td><td>Sofia</td><td>Walker</td><td>sofia.walker@example.com</td><td>2024-12-05</td><td>F</td><td>Non</td>
                  100          </tr>
                  101          <tr>
                  102            <td>25</td><td>Isaac</td><td>Hall</td><td>isaac.hall@example.com</td><td>2025-01-20</td><td>M</td><td>Oui</td>
                  103          </tr>
                  104          <tr>
                  105            <td>26</td><td>Abigail</td><td>Allen</td><td>abigail.allen@example.com</td><td>2025-02-12</td><td>F</td><td>Non</td>
                  106          </tr>
                  107          <tr>
                  108            <td>27</td><td>Caleb</td><td>Young</td><td>caleb.young@example.com</td><td>2025-03-08</td><td>M</td><td>Oui</td>
                  109          </tr>
                  110          <tr>
                  111            <td>28</td><td>Madison</td><td>King</td><td>madison.king@example.com</td><td>2025-04-03</td><td>F</td><td>Non</td>
                  112          </tr>
                  113          <tr>
                  114            <td>29</td><td>Nathan</td><td>Wright</td><td>nathan.wright@example.com</td><td>2025-05-18</td><td>M</td><td>Oui</td>
                  115          </tr>
                  116          <tr>
                  117            <td>30</td><td>Lillian</td><td>Scott</td><td>lillian.scott@example.com</td><td>2025-06-02</td><td>F</td><td>Non</td>
                  118          </tr>
                  119          <tr>
                  120            <td>31</td><td>Oscar</td><td>Green</td><td>oscar.green@example.com</td><td>2025-07-15</td><td>M</td><td>Oui</td>
                  121          </tr>
                  122          <tr>
                  123            <td>32</td><td>Victoria</td><td>Adams</td><td>victoria.adams@example.com</td><td>2025-08-01</td><td>F</td><td>Non</td>
                  124          </tr>
                  125          <tr>
                  126            <td>33</td><td>Julian</td><td>Baker</td><td>julian.baker@example.com</td><td>2025-09-10</td><td>M</td><td>Oui</td>
                  127          </tr>
                  128          <tr>
                  129            <td>34</td><td>Grace</td><td>Nelson</td><td>grace.nelson@example.com</td><td>2025-10-05</td><td>F</td><td>Non</td>
                  130          </tr>
                  131          <tr>
                  132            <td>35</td><td>Leo</td><td>Hill</td><td>leo.hill@example.com</td><td>2025-11-20</td><td>M</td><td>Oui</td>
                  133          </tr>
                  134          <tr>
                  135            <td>36</td><td>Chloe</td><td>Carter</td><td>chloe.carter@example.com</td><td>2025-12-12</td><td>F</td><td>Non</td>
                  136          </tr>
                  137          <tr>
                  138            <td>37</td><td>Elijah</td><td>Evans</td><td>elijah.evans@example.com</td><td>2026-01-08</td><td>M</td><td>Oui</td>
                  139          </tr>
                  140          <tr>
                  141            <td>38</td><td>Zoey</td><td>Parker</td><td>zoey.parker@example.com</td><td>2026-02-03</td><td>F</td><td>Non</td>
                  142          </tr>
                  143          <tr>
                  144            <td>39</td><td>Carter</td><td>Roberts</td><td>carter.roberts@example.com</td><td>2026-03-18</td><td>M</td><td>Oui</td>
                  145          </tr>
                  146          <tr>
                  147            <td>40</td><td>Penelope</td><td>Walker</td><td>penelope.walker@example.com</td><td>2026-04-02</td><td>F</td><td>Non</td>
                  148          </tr>
                  149          <tr>
                  150            <td>41</td><td>Wyatt</td><td>Hall</td><td>wyatt.hall@example.com</td><td>2026-05-15</td><td>M</td><td>Oui</td>
                  151          </tr>
                  152          <tr>
                  153            <td>42</td><td>Savannah</td><td>Allen</td><td>savannah.allen@example.com</td><td>2026-06-01</td><td>F</td><td>Non</td>
                  154          </tr>
                  155          <tr>
                  156            <td>43</td><td>Grayson</td><td>Young</td><td>grayson.young@example.com</td><td>2026-07-10</td><td>M</td><td>Oui</td>
                  157          </tr>
                  158          <tr>
                  159            <td>44</td><td>Brooklyn</td><td>King</td><td>brooklyn.king@example.com</td><td>2026-08-05</td><td>F</td><td>Non</td>
                  160          </tr>
                  161          <tr>
                  162            <td>45</td><td>Logan</td><td>Wright</td><td>logan.wright@example.com</td><td>2026-09-20</td><td>M</td><td>Oui</td>
                  163          </tr>
                  164          <tr>
                  165            <td>46</td><td>Skylar</td><td>Scott</td><td>skylar.scott@example.com</td><td>2026-10-12</td><td>F</td><td>Non</td>
                  166          </tr>
                  167          <tr>
                  168            <td>47</td><td>Cameron</td><td>Green</td><td>cameron.green@example.com</td><td>2026-11-08</td><td>M</td><td>Oui</td>
                  169          </tr>
                  170          <tr>
                  171            <td>48</td><td>Gabriella</td><td>Adams</td><td>gabriella.adams@example.com</td><td>2026-12-03</td><td>F</td><td>Non</td>
                  172          </tr>
                  173          <tr>
                  174            <td>49</td><td>Mason</td><td>Baker</td><td>mason.baker@example.com</td><td>2027-01-18</td><td>M</td><td>Oui</td>
                  175          </tr>
                  176          <tr>
                  177            <td>50</td><td>Natalie</td><td>Nelson</td><td>natalie.nelson@example.com</td><td>2027-02-02</td><td>F</td><td>Non</td>
                  178          </tr>
                  179          <tr>
                  180            <td>51</td><td>Ethan</td><td>Hill</td><td>ethan.hill@example.com</td><td>2027-03-15</td><td>M</td><td>Oui</td>
                  181          </tr>
                  182          <tr>
                  183            <td>52</td><td>Avery</td><td>Carter</td><td>avery.carter@example.com</td><td>2027-04-01</td><td>F</td><td>Non</td>
                  184          </tr>
                  185          <tr>
                  186            <td>53</td><td>Carter</td><td>Evans</td><td>carter.evans@example.com</td><td>2027-05-10</td><td>M</td><td>Oui</td>
                  187          </tr>
                  188          <tr>
                  189            <td>54</td><td>Paisley</td><td>Parker</td><td>paisley.parker@example.com</td><td>2027-06-05</td><td>F</td><td>Non</td>
                  189          </tr>
                  190          <tr>
                  191            <td>55</td><td>Carter</td><td>Roberts</td><td>carter.roberts@example.com</td><td>2027-07-20</td><td>M</td><td>Oui</td>
                  192          </tr>
                  193          <tr>
                  194            <td>56</td><td>Brooklyn</td><td>Walker</td><td>brooklyn.walker@example.com</td><td>2027-08-12</td><td>F</td><td>Non</td>
                  195          </tr>
                  196          <tr>
                  197            <td>57</td><td>Logan</td><td>Hall</td><td>logan.hall@example.com</td><td>2027-09-08</td><td>M</td><td>Oui</td>
                  198          </tr>
                  199          <tr>
                  200            <td>58</td><td>Savannah</td><td>Allen</td><td>savannah.allen@example.com</td><td>2027-10-03</td><td>F</td><td>Non</td>
                  201          </tr>
                  202          <tr>
                  203            <td>59</td><td>Grayson</td><td>Young</td><td>grayson.young@example.com</td><td>2027-11-18</td><td>M</td><td>Oui</td>
                  204          </tr>
                  205          <tr>
                  206            <td>60</td><td>Brooklyn</td><td>King</td><td>brooklyn.king@example.com</td><td>2027-12-02</td><td>F</td><td>Non</td>
                  207          </tr>
                  208          <tr>
                  209            <td>61</td><td>Logan</td><td>Wright</td><td>logan.wright@example.com</td><td>2028-01-15</td><td>M</td><td>Oui</td>
                  210          </tr>
                  211          <tr>
                  212            <td>62</td><td>Savannah</td><td>Scott</td><td>savannah.scott@example.com</td><td>2028-02-01</td><td>F</td><td>Non</td>
                  213          </tr>
                  214          <tr>
                  215            <td>63</td><td>Cameron</td><td>Green</td><td>cameron.green@example.com</td><td>2028-03-10</td><td>M</td><td>Oui</td>
                  216          </tr>
                  217          <tr>
                  218            <td>64</td><td>Gabriella</td><td>Adams</td><td>gabriella.adams@example.com</td><td>2028-04-05</td><td>F</td><td>Non</td>
                  219          </tr>
                  220          <tr>
                  221            <td>65</td><td>Mason</td><td>Baker</td><td>mason.baker@example.com</td><td>2028-05-20</td><td>M</td><td>Oui</td>
                  221          </tr>
                  222          <tr>
                  223            <td>66</td><td>Natalie</td><td>Nelson</td><td>natalie.nelson@example.com</td><td>2028-06-12</td><td>F</td><td>Non</td>
                  224          </tr>
                  225          <tr>
                  226            <td>67</td><td>Ethan</td><td>Hill</td><td>ethan.hill@example.com</td><td>2028-07-08</td><td>M</td><td>Oui</td>
                  227          </tr>
                  228          <tr>
                  229            <td>68</td><td>Avery</td><td>Carter</td><td>avery.carter@example.com</td><td>2028-08-03</td><td>F</td><td>Non</td>
                  229          </tr>
                  230          <tr>
                  231            <td>69</td><td>Carter</td><td>Evans</td><td>carter.evans@example.com</td><td>2028-09-18</td><td>M</td><td>Oui</td>
                  231          </tr>
                  232          <tr>
                  233            <td>70</td><td>Paisley</td><td>Parker</td><td>paisley.parker@example.com</td><td>2028-10-12</td><td>F</td><td>Non</td>
                  233          </tr>
                  234          <tr>
                  235            <td>71</td><td>Carter</td><td>Roberts</td><td>carter.roberts@example.com</td><td>2028-11-08</td><td>M</td><td>Oui</td>
                  235          </tr>
                  236          <tr>
                  237            <td>72</td><td>Brooklyn</td><td>Walker</td><td>brooklyn.walker@example.com</td><td>2028-12-03</td><td>F</td><td>Non</td>
                  237          </tr>
                  238          <tr>
                  239            <td>73</td><td>Logan</td><td>Hall</td><td>logan.hall@example.com</td><td>2029-01-18</td><td>M</td><td>Oui</td>
                  239          </tr>
                  240          <tr>
                  241            <td>74</td><td>Savannah</td><td>Allen</td><td>savannah.allen@example.com</td><td>2029-02-12</td><td>F</td><td>Non</td>
                  241          </tr>
                  242          <tr>
                  243            <td>75</td><td>Grayson</td><td>Young</td><td>grayson.young@example.com</td><td>2029-03-08</td><td>M</td><td>Oui</td>
                  243          </tr>
                  244          <tr>
                  245            <td>76</td><td>Brooklyn</td><td>King</td><td>brooklyn.king@example.com</td><td>2029-04-03</td><td>F</td><td>Non</td>
                  245          </tr>
                  246          <tr>
                  247            <td>77</td><td>Logan</td><td>Wright</td><td>logan.wright@example.com</td><td>2029-05-18</td><td>M</td><td>Oui</td>
                  247          </tr>
                  248          <tr>
                  249            <td>78</td><td>Savannah</td><td>Scott</td><td>savannah.scott@example.com</td><td>2029-06-12</td><td>F</td><td>Non</td>
                  249          </tr>
                  250          <tr>
                  251            <td>79</td><td>Cameron</td><td>Green</td><td>cameron.green@example.com</td><td>2029-07-08</td><td>M</td><td>Oui</td>
                  251          </tr>
                  252          <tr>
                  253            <td>80</td><td>Gabriella</td><td>Adams</td><td>gabriella.adams@example.com</td><td>2029-08-03</td><td>F</td><td>Non</td>
                  253          </tr>
                  254          <tr>
                  255            <td>81</td><td>Mason</td><td>Baker</td><td>mason.baker@example.com</td><td>2029-09-18</td><td>M</td><td>Oui</td>
                  255          </tr>
                  256          <tr>
                  257            <td>82</td><td>Natalie</td><td>Nelson</td><td>natalie.nelson@example.com</td><td>2029-10-12</td><td>F</td><td>Non</td>
                  257          </tr>
                  258          <tr>
                  259            <td>83</td><td>Ethan</td><td>Hill</td><td>ethan.hill@example.com</td><td>2029-11-08</td><td>M</td><td>Oui</td>
                  259          </tr>
                  260          <tr>
                  261            <td>84</td><td>Avery</td><td>Carter</td><td>avery.carter@example.com</td><td>2029-12-03</td><td>F</td><td>Non</td>
                  261          </tr>
                  262          <tr>
                  263            <td>85</td><td>Carter</td><td>Evans</td><td>carter.evans@example.com</td><td>2030-01-18</td><td>M</td><td>Oui</td>
                  263          </tr>
                  264          <tr>
                  265            <td>86</td><td>Paisley</td><td>Parker</td><td>paisley.parker@example.com</td><td>2030-02-12</td><td>F</td><td>Non</td>
                  265          </tr>
                  266          <tr>
                  267            <td>87</td><td>Carter</td><td>Roberts</td><td>carter.roberts@example.com</td><td>2030-03-08</td><td>M</td><td>Oui</td>
                  267          </tr>
                  268          <tr>
                  269            <td>88</td><td>Brooklyn</td><td>Walker</td><td>brooklyn.walker@example.com</td><td>2030-04-03</td><td>F</td><td>Non</td>
                  269          </tr>
                  270          <tr>
                  271            <td>89</td><td>Logan</td><td>Hall</td><td>logan.hall@example.com</td><td>2030-05-18</td><td>M</td><td>Oui</td>
                  271          </tr>
                  272          <tr>
                  273            <td>90</td><td>Savannah</td><td>Allen</td><td>savannah.allen@example.com</td><td>2030-06-12</td><td>F</td><td>Non</td>
                  273          </tr>
                  274          <tr>
                  275            <td>91</td><td>Grayson</td><td>Young</td><td>grayson.young@example.com</td><td>2030-07-08</td><td>M</td><td>Oui</td>
                  275          </tr>
                  276          <tr>
                  277            <td>92</td><td>Brooklyn</td><td>King</td><td>brooklyn.king@example.com</td><td>2030-08-03
```

Pour la sécurité de l'application on va ajouter l'authentification et les rôles tel que chaque utilisateur avec le rôle ADMIN peut afficher, ajouter, modifier, ou supprimer des étudiants. Mais un utilisateur avec le rôle USER ne peut faire que l'affichage.

Donc on ajoute un dossier sec ou on va configurer cette fonctionnalité

```

30 // .rolePrefix("ROLE_")
31 // .passwordEncoder(passwordEncoder);
32
33 /*
34 String encodedPWD=passwordEncoder.encode("1111");
35 System.out.println(encodedPWD);
36 auth.inMemoryAuthentication()
37     .withUser("user1").password(encodedPWD).roles("USER")
38     .and()
39     .withUser("user2").password(passwordEncoder.encode("2222")).roles("USER")
40     .and()
41     .withUser("admin").password(passwordEncoder.encode("3333")).roles("USER", "ADMIN");
42
43 */
44 auth.userDetailsService(userDetailsService);
45
46
47
48 @Override
49 protected void configure(HttpSecurity http) throws Exception {
50     // http.formLogin().loginPage("/auth");
51     http.formLogin();
52     http.authorizeRequests().antMatchers("/").permitAll();
53     http.authorizeRequests().antMatchers("/admin/**").hasAuthority("ADMIN");
54     http.authorizeRequests().antMatchers("/user/**").hasAuthority("USER");
55     http.authorizeRequests().antMatchers("/webjars/**").permitAll();
56     http.authorizeRequests().antMatchers("/auth/**").permitAll();
57     // http.authorizeRequests().anyRequest().authenticated();
58     http.exceptionHandling().accessDeniedPage("/403");
59 }

```

La fonction main de l'application

```

22
23 @Bean
24 CommandLineRunner commandLineRunner(EtudiantRepository etudiantRepository) {
25     return args -> {
26         for (int i = 0; i < 20; i++) {
27             etudiantRepository.save(new Etudiant( id: null, nom: "Hasbi", prenom: "Fatima Zahra ", email: "hasbi@gmail.com",
28             etudiantRepository.save(new Etudiant( id: null, nom: "Hasbi", prenom: "Achraf", email: "achraf@gmail.com", new Date(),
29             etudiantRepository.save(new Etudiant( id: null, nom: "Hasbi", prenom: "Hasnaa", email: "hasnaa@gmail.com", new Date(),
30             etudiantRepository.save(new Etudiant( id: null, nom: "Hasbi", prenom: "Nouredine", email: "noured@gmail.com", new Date(),
31             etudiantRepository.save(new Etudiant( id: null, nom: "Chahbi", prenom: "Laila", email: "laila@gmail.com", new Date(),
32             etudiantRepository.save(new Etudiant( id: null, nom: "Hasbi", prenom: "Halima", email: "halima@gmail.com", new Date(),
33             etudiantRepository.save(new Etudiant( id: null, nom: "Dadda", prenom: "Hamza", email: "hamza@gmail.com", new Date(),
34         });
35     };
36
37
38
39 @Bean
40 PasswordEncoder passwordEncoder(){
41
42     return new BCryptPasswordEncoder();
43 }
44
45
46 @Bean
47 CommandLineRunner saveUsers(SecurityService securityService) {
48     return args -> {
49         securityService.saveNewUser( username: "Fatima Zahra", password: "1234", rePassword: "1234");
50         securityService.saveNewUser( username: "Hasnaa", password: "1234", rePassword: "1234");
51         securityService.saveNewUser( username: "Achraf", password: "1234", rePassword: "1234");
52
53         securityService.saveNewRole( roleName: "USER", description: "");
54         securityService.saveNewRole( roleName: "ADMIN", description: "");
55     };
56 }

```

Dans application.properties

```
application.properties x
1  server.port=8086
2  spring.datasource.url=jdbc:mysql://localhost:3306/ETUD_DB?createDatabaseIfNotExist=true
3  spring.datasource.username=root
4  spring.datasource.password=
5  spring.jpa.hibernate.ddl-auto = create
6  spring.jpa.properties.hibernate.dialect = org.hibernate.dialect.MariaDBDialect
7  spring.jpa.show-sql=true
8  spring.thymeleaf.cache=false
9  spring.main.allow-circular-references = true
10 |
```

## Démonstration

Please sign in

Fatima Zahra

\*\*\*

Sign in

HomeLinkLinkDisabledEtudiants

Fatima Zahra

Liste des étudiants

Key wordChercher

ID	Nom	Prénom	Email	Date	Genre	En règle		
1	Hasbi	Fatima Zahra	hasbi@gmail.com	2022-04-18	FEMENIN	true	Delete	Edit
2	Hasbi	Achraf	achraf@gmail.com	2022-04-18	MASCULIN	true	Delete	Edit
3	Hasbi	Hasnaa	hasnaa@gmail.com	2022-04-18	FEMENIN	true	Delete	Edit
4	Hasbi	Noureddine	noured@gmail.com	2022-04-18	MASCULIN	true	Delete	Edit
5	Chahi	Laila	Laila@gmail.com	2022-04-18	FEMENIN	true	Delete	Edit

0123456789101112131415161718192021222324252627

HomeLinkLinkDisabledEtudiants

Fatima Zahra

Id : 1

Nom

Prénom

Email

Date Naissance

☒ FEMENIN

☐ MASCULIN

☐ En règle

Save

HomeLinkLinkDisabledEtudiants

Fatima Zahra

Liste des étudiants

Key wordChercher

ID	Nom	Prénom	Email	Date	Genre	En règle		
1	Hasbi	Fatima Zahra	hasbi@gmail.com	2022-04-18	FEMENIN	false	Delete	Edit
2	Hasbi	Achraf	achraf@gmail.com	2022-04-18	MASCULIN	true	Delete	Edit
3	Hasbi	Hasnaa	hasnaa@gmail.com	2022-04-18	FEMENIN	true	Delete	Edit
4	Hasbi	Noureddine	noured@gmail.com	2022-04-18	MASCULIN	true	Delete	Edit
5	Chahi	Laila	Laila@gmail.com	2022-04-18	FEMENIN	true	Delete	Edit

0123456789101112131415161718192021222324252627



localhost:8086/admin/formEtudiants

Home Link Link Disabled Etudiants Fatima Zahra

Nom  
test

Prénom  
test

Email  
fatyhasbi04@gmail.com

Date Naissance  
04/06/2022

☒ FEMENIN  
☐ MASCULIN

☒ En règle

Save

localhost:8086/logout

Are you sure you want to log out?

Log Out

Please sign in

You have been signed out

Fatima Zahra

\*\*\*\*

Sign in

Si on fait l'authentification avec un utilisateur qui a le rôle USER on va pas avoir le droit pour ajouter, modifier ou supprimer

Chercher

### Liste des étudiants

Key word

ID	Nom	Prénom	Email	Date	Genre	En règle
1	Hasbi	Fatima Zahra	hasbi@gmail.com	2022-04-18	FEMENIN	false
2	Hasbi	Achraf	achraf@gmail.com	2022-04-18	MASCULIN	true
3	Hasbi	Hasnaa	hasnaa@gmail.com	2022-04-18	FEMENIN	true
4	Hasbi	Noureddine	noured@gmail.com	2022-04-18	MASCULIN	true
5	Chahi	Laila	Laila@gmail.com	2022-04-18	FEMENIN	true

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

Si on tente d'y accéder depuis l'url on va avoir cette page avec le message suivant

Vous n'avez pas le droit pour accéder à cette ressource

Sur phpMyAdmin

phpMyAdmin

Server: 127.0.0.1 » Database: etud\_db

Structure SQL Search Query Export Import Operations Privileges Routines Events

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overl
<input type="checkbox"/> app_role	★ Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_general_ci	32.0 KiB	
<input type="checkbox"/> app_user	★ Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	32.0 KiB	
<input type="checkbox"/> app_user_app_roles	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	48.0 KiB	
<input type="checkbox"/> etudiant	★ Browse Structure Search Insert Empty Drop	140	InnoDB	utf8mb4_general_ci	16.0 KiB	
4 tables	Sum	149	InnoDB	utf8mb4_general_ci	128.0 KiB	

↑ ☐ Check all With selected:

Print Data dictionary

Create table

Name:  Number of columns:

## Sur GitHub

The screenshot shows the GitHub interface for a repository named 'JEE-AP-Spring-MVC-Spring-Data-JPA-Spring-Security' by user 'FatimaZahraHASBI'. The repository is public. The page displays the repository's structure, including a table of files and folders, and the content of the README.md file.

**Repository Information:**

- Owner: FatimaZahraHASBI
- Repository Name: JEE-AP-Spring-MVC-Spring-Data-JPA-Spring-Security
- Visibility: Public
- Branch: master
- 1 branch, 0 tags
- Go to file, Add file, Code buttons

**File List:**

File/Folder	Commit Message	Commit Date
.mvn/wrapper	initial commit	7 days ago
src	security	7 days ago
.gitignore	initial commit	7 days ago
README.md	Update README.md	7 days ago
mvnw	initial commit	7 days ago
mvnw.cmd	initial commit	7 days ago
pom.xml	initial commit	7 days ago

**README.md Content:**

**JEE-AP-Spring-MVC-Spring-Data-JPA-Spring-Security**

Application Web basée sur Spring MVC, Spring Data JPA et Spring Security qui permet de gérer des étudiants.