



Architecture and framework web

Création d'une application web CRUD
2025-2026

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2016 – Licence Informatique
2018 – Master INIS
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2017 – Diplôme BTS SIO
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Mise en place d'une API Java Spring

Plan

TP 1 : Mise en place d'un projet Spring, des objets métiers et d'une base de données

TP2 : Mise en place de repositories et de services manipulant les objets métiers

TP3 : Mise en place de la couche d'exposition



DTO & Mapstruct

Créer les DTO dont vous aurez besoin et utilisez mapstruct pour générer les mappers correspondant.

```
● ● ●
1  <build>
2    <plugins>
3      <plugin>
4        <groupId>org.springframework.boot</groupId>
5        <artifactId>spring-boot-maven-plugin</artifactId>
6      </plugin>
7      <plugin>
8        <groupId>org.apache.maven.plugins</groupId>
9        <artifactId>maven-compiler-plugin</artifactId>
10       <version>3.11.0</version>
11       <configuration>
12         <annotationProcessorPaths>
13           <path>
14             <groupId>org.mapstruct</groupId>
15             <artifactId>mapstruct-processor</artifactId>
16             <version>1.5.5.Final</version>
17           </path>
18
19           <path>
20             <groupId>org.projectlombok</groupId>
21             <artifactId>lombok</artifactId>
22             <version>1.18.34</version>
23           </path>
24
25           <!-- This is needed when using Lombok 1.18.16 and above -->
26           <path>
27             <groupId>org.projectlombok</groupId>
28             <artifactId>lombok-mapstruct-binding</artifactId>
29             <version>0.2.0</version>
30           </path>
31         </annotationProcessorPaths>
32       </configuration>
33     </plugin>
34   </plugins>
35 </build>
```

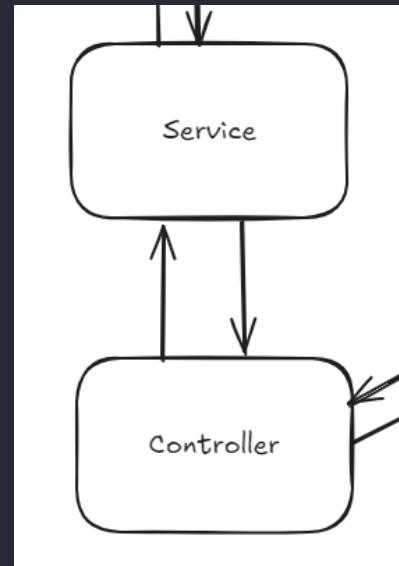


Controller

Créer un @Controller Spring pour la gestion des utilisateurs et un pour celle des objets métier de votre projet.

Ceux-ci doivent permettre d'accéder aux méthodes du services et renvoyer une ResponseEntity englobant un DTO ou une liste de DTO.

Celles-ci doivent permettre d'accéder aux opérations CRUD du Service en utilisant les actions HTTP appropriées.





Outils type bruno // postman

The screenshot shows the Postman application interface. At the top, there's a navigation bar with 'Home', 'Workspaces', 'Explore', a search bar 'Search Postman', and account options 'Sign In' and 'Create Account'. Below the navigation is a 'History' sidebar showing a recent request to 'localhost:8081/api/utilisateur'. The main workspace displays a 'localhost:8081/api/utilisateur' collection with a single 'GET' request. The request details show the URL 'localhost:8081/api/utilisateur'. The 'Params' tab is selected, showing an empty table for query parameters. The 'Body' tab is selected, displaying a JSON response with line numbers. The response body is:

```
1  {
2   "id": 1,
3   "mail": "bob@hotmail.fr",
4   "username": "bob",
5   "password": "bob",
6   "reservations": [
7     {
8       "id": {
9         "boiteId": 38,
10        "utilisateurId": 1
11       },
12       "boite": {
13         "id": 38,
14         "nom": "Boîte à lire du CEST",
15         "description": "CEST (Centre d'Education Sportive de Tours)",
16         "quantite": 12,
17         "pointGeo": "47.3903436256, 0.6961206773",
18         "reservations": null
19       }
20     }
21 }
```



Gestion d'une exception

Vous devez mettre en place au moins une exception permettant de retourner un Message HTTP de code 400
(https://developer.mozilla.org/fr/docs/Web/HTTP/Status#r%C3%A9ponses_d'erreur_c%C3%B4t%C3%A9_client)

```
● ● ●
1 import java.io.Serial;
2 import org.springframework.http.HttpStatus;
3 import org.springframework.web.bind.annotationResponseStatus;
4
5 @ResponseStatus(value = HttpStatus.NOT_FOUND, reason = "The character has not been found")
6 public class TreeNotFoundException extends RuntimeException {
7
8     @Serial
9     private static final long serialVersionUID = -7037004598000605722L;
10
11 }
```

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