

Activité Pratique de Synthèse : Spring Mvc Spring Data, Spring Security



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Introduction :

Dans ce TP on va créer une application qui permet de gérer des patients en utilisant Spring MVC, Spring Data, JPA, Spring Security

ENNONCE :

Partie1 :

- Rechercher Patients, Pagination, Suppression

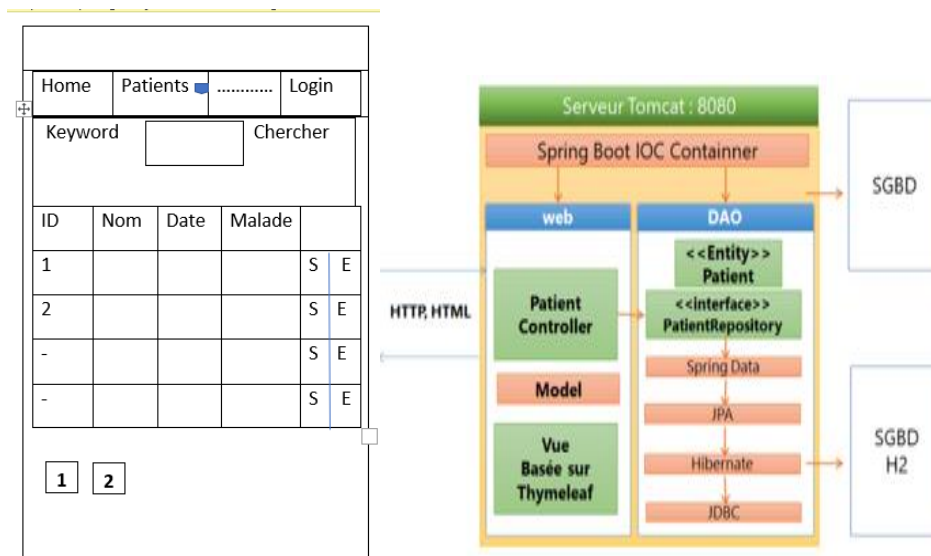
Partie2 :

- Page Template, Ajouter, Validation, Modifier, Update

Partie3 :

- Sécurité InMemoryAuthentication, JDBCAuthentication, UserDetailsService.

CONCEPTION ET ARCHITECTURE :



CODE SOURCE :

Le lien de mon code en GitHub : <https://github.com/Khoumaniasmaa/Patient-springmvc-thymeleaf-security.git>

Capture d'écran :

Partie 1 :

- Avec H2 :

➤ Chercher un patient avec différents critères (ID)

```

PatientRepository.java
27
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44
new Patient(id: null, nom: "Imane", new Date(), malade: false, score: 210);
List<Patient> patients = patientRepository.findAll();
patients.forEach(p -> {
    System.out.println("*****afficher*****");
    System.out.println(p.getId());
    System.out.println(p.getNom());
    System.out.println(p.getScore());
    System.out.println(p.getDateNaissance());
    System.out.println(p.isMalade());
});
System.out.println("*****chercher*****");
Patient patient = patientRepository.findById(1L).orElse(null);
if (patient != null) {
    System.out.println(patient.getNom());
    System.out.println(patient.isMalade());
}
}
}

Run: JeetpApplication
Console
false
*****
hassan
false

```

➤ Supprimer un Patient

```

PatientRepository.java
35
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49
System.out.println(p.isMalade());
});
System.out.println("*****chercher*****");
Patient patient = patientRepository.findById(1L).orElse(null);
if (patient != null) {
    System.out.println(patient.getNom());
    System.out.println(patient.isMalade());
}
System.out.println("*****Mise a jour*****");
patient.setScore(870);
patientRepository.save(patient);
System.out.println("*****Supprimer par ID*****");
patientRepository.deleteById(1L);
}
}

Run: jdbc:h2:mem:patient-db
PATIENT
INFORMATION_SCHEMA
Sequences
Users
H2 1.4.200 (2019-10-14)

Run Run Selected Auto complete Clear SQL statement:
SELECT * FROM PATIENT

SELECT * FROM PATIENT;
ID DATE_NAISSANCE MALADE NOM SCORE
2 2022-03-22 TRUE Asmaa 100
3 2022-03-22 FALSE Imane 210
(2 rows, 7 ms)

Edit

```

➤ Tester la pagination :

The screenshot shows an IDE with several tabs: HELP.md, Patient.java, PatientRepository.java, JeetpApplication.java, JeetpApplicationTests.java, and application.properties. The code in PatientRepository.java is as follows:

```

22     for (int i=0;i<100;i++){
23         patientRepository.save(
24             new Patient( id: null, nom: "Asmaa", new Date(), malade: false, (int)(Math.random()*100));
25     }

```

The Run console shows the output of the application:

```

1
Asmaa
0
2022-03-24
false
*****affichage*****
2
Asmaa
95
2022-03-24
false
*****affichage*****
3
Asmaa
75
2022-03-24
false
*****affichage*****
4
Asmaa
4
2022-03-24
false
*****affichage*****

```

The screenshot shows a database client interface with a table named PATIENT. The table has the following columns: ID, DATE_NAISSANCE, MALADE, NOM, and SCORE. The data is as follows:

ID	DATE_NAISSANCE	MALADE	NOM	SCORE
2	2022-03-24	FALSE	Asmaa	95
3	2022-03-24	FALSE	Asmaa	75
4	2022-03-24	FALSE	Asmaa	4
5	2022-03-24	FALSE	Asmaa	71
6	2022-03-24	FALSE	Asmaa	19
7	2022-03-24	FALSE	Asmaa	63
8	2022-03-24	FALSE	Asmaa	40
9	2022-03-24	FALSE	Asmaa	13
10	2022-03-24	FALSE	Asmaa	20
11	2022-03-24	FALSE	Asmaa	21
12	2022-03-24	FALSE	Asmaa	50
13	2022-03-24	FALSE	Asmaa	74
14	2022-03-24	FALSE	Asmaa	14
15	2022-03-24	FALSE	Asmaa	5
16	2022-03-24	FALSE	Asmaa	29
17	2022-03-24	FALSE	Asmaa	14

- Avec MySQL :

- Chercher Patients :

localhost:8082/index?page=2&keyword=As

Liste des patients

key word

ID	Nom	Data	Malade	Score
41	Asmaa	2022-03-26	false	12
45	Asmaa	2022-03-26	false	12
49	Asmaa	2022-03-26	false	12
53	Asmaa	2022-03-26	false	12
57	Asmaa	2022-03-26	false	12

0 1 2 3 4 5 6

➤ Pagination

localhost:8082/index?page=1

Liste des patients

ID	Nom	Data	Malade	Score
6	hayat	2022-03-26	true	321
7	janat	2022-03-26	false	65
8	hanae	2022-03-26	true	32
9	Asmaa	2022-03-26	false	12
10	hayat	2022-03-26	true	321

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

➤ Supprimer :

localhost:8082/user/index

Home Link Link Disabled Patients

localhost:8082 indique
etez vous sure?

OK Annuler

Liste des patients

key word

ID	Nom	Data	Malade	Score		
18	hayate	2022-03-26	true	570	Delete	Edit
19	janat	2022-03-26	false	65	Delete	Edit
22	hayat	2022-03-26	true	321	Delete	Edit
23	janat	2022-03-26	false	65	Delete	Edit
24	hanae	2022-03-26	true	32	Delete	Edit

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45
46 47 48 49 50

localhost:8082/admin/delete?id=18&keyword=&page=0

localhost:8082/user/index?page0&keyword

Home Link Link Disabled Patients mohamed

Liste des patients

key word Chercher

ID	Nom	Date	Malade	Score		
19	janat	2022-03-26	false	65	Delete	Edit
22	hayat	2022-03-26	true	321	Delete	Edit
23	janat	2022-03-26	false	65	Delete	Edit
24	hanae	2022-03-26	true	32	Delete	Edit
25	Asmaa	2022-03-26	false	12	Delete	Edit

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

46 47 48 49 50

Partie2 :

Avec H2 :

Ajouter des Patients

Project

HELP.md Patient.java PatientRepository.java JeetpApplication.java JeetpApplicationTests.java application.properties

```

@SpringBootApplication
public class JeetpApplication implements CommandLineRunner {
    @Autowired
    private PatientRepository patientRepository;
    public static void main(String[] args) {
        SpringApplication.run(JeetpApplication.class, args);
    }
    @Override
    public void run(String... args) throws Exception {
        patientRepository.save(
            new Patient(id: null, nom: "hassan", new Date(), malade: false, score: 56));
        patientRepository.save(
            new Patient(id: null, nom: "Asmaa", new Date(), malade: true, score: 100));
        patientRepository.save(
            new Patient(id: null, nom: "Imane", new Date(), malade: false, score: 210));
    }
}

```

Run: JeetpApplication

Console

```

2022-03-22 13:08:45.778 INFO 1528 --- [main] o.hibernate.annotations.common.Version : HHH00000001: Hibernate Commons Annotations 5.1.2.Final
2022-03-22 13:08:45.913 INFO 1528 --- [main] org.hibernate.dialect.Dialect : HHH000400: Using dialect: org.hibernate.dialect.H2Dialect
2022-03-22 13:08:46.506 INFO 1528 --- [main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000490: Using JtaPlatform implementation: [org.hibernate.j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default']
2022-03-22 13:08:46.516 INFO 1528 --- [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2022-03-22 13:08:46.838 WARN 1528 --- [main] j.LocalContainerEntityManagerFactoryBean : spring.jpa.open-in-view is enabled by default. Therefore, application classes must implement the javax.persistence.OpenInView interface. Enable this by setting spring.jpa.open-in-view=false in the application.properties file.
2022-03-22 13:08:47.250 INFO 1528 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8082 (http) with context path: /
2022-03-22 13:08:47.264 INFO 1528 --- [main] ma.emsi.jeetp.JeetpApplication : Started JeetpApplication

```

H2 Console

localhost:8082/h2-console/login.do?sessionId=051c4cb0cb74935097dded0264122218

Auto commit Max rows: 1000 Auto complete Off Auto select On

jdbc:h2:mem:patient-db

PATIENT

INFORMATION_SCHEMA

Sequences

Users

H2 1.4.200 (2019-10-14)

Run Run Selected Auto complete Clear SQL statement:

SELECT * FROM PATIENT PATIENT

SELECT * FROM PATIENT PATIENT;

ID	DATE_NAISSANCE	MALADE	NOM	SCORE
1	2022-03-22	FALSE	hassan	56
2	2022-03-22	TRUE	Asmaa	100
3	2022-03-22	FALSE	Imane	210

(3 rows, 6 ms)

Edit

➤ Lister des Patients :

JEETP - JeetpApplication.java

```

19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
    @Override
    public void run(String... args) throws Exception {
        patientRepository.save(
            new Patient(id: null, nom: "hassan", new Date(), malade: false, score: 56));
        patientRepository.save(
            new Patient(id: null, nom: "Asmaa", new Date(), malade: true, score: 100));
        patientRepository.save(
            new Patient(id: null, nom: "Imane", new Date(), malade: false, score: 210));
        List<Patient> patients = patientRepository.findAll();
        patients.forEach(p -> {
            System.out.println("*****");
            System.out.println(p.getId());
            System.out.println(p.getNom());
            System.out.println(p.getScore());
            System.out.println(p.getDateNaissance());
            System.out.println(p.isMalade());
        });
    }

```

Run: JeetpApplication

Console

```

2022-03-22 13:20:42.360 INFO 16816 --- [main] ma.emsi.jeetp.JeetpApplication : Started JeetpApplic
*****
1
hassan
56
2022-03-22
false
*****
2
Asmaa
100
2022-03-22
true
*****
3
Imane
210
2022-03-22
false

```

➤ Modifier un Patient

```

System.out.println("*****ATTENTION*****");
System.out.println(p.getId());
System.out.println(p.getNom());
System.out.println(p.getScore());
System.out.println(p.getDateNaissance());
System.out.println(p.isMalade());
});
System.out.println("*****chercher*****");
Patient patient=patientRepository.findById(1L).orElse( other: null);
if(patient!=null){
    System.out.println(patient.getNom());
    System.out.println(patient.isMalade());
    System.out.println("*****Mise a jour*****");
    patient.setScore(870);
    patientRepository.save(patient);
}
}

```

Run: JeetpApplication

Console:

```

*****chercher*****
hassan
false
*****Mise a jour*****

```

Run Run Selected Auto complete Clear SQL statement:

SELECT * FROM PATIENT

SELECT * FROM PATIENT;

ID	DATE_NAISSANCE	MALADE	NOM	SCORE
1	2022-03-22	FALSE	hassan	870
2	2022-03-22	TRUE	Asmaa	100
3	2022-03-22	FALSE	Imane	210

(3 rows, 8 ms)

Edit

• Migrer L'application de H2 vers My SQL Avec Template

➤ Lister les pateints

Home Link Link Disabled Patients [Username]

Liste des patients

key word:

ID	Nom	Data	Malade	Score		
105	Asmaak	2022-03-27	true	120	Delete	Edit
109	Asmaa	2022-03-27	false	12	Delete	Edit
113	Asmaa	2022-03-27	false	12	Delete	Edit
117	Asmaa	2022-03-27	false	12	Delete	Edit
121	Asmaa	2022-03-27	false	12	Delete	Edit

0 1 2 3 4 5 6 7 8 9 10 11

Ajouter un Patients :

localhost8082/editPatient?id=105&keyword=as&page=4

Home Link Link Disabled Patients [Username]

ID 105

Nom

Asmaak

Date de Naissance

27/03/2022

Malade ☒

Score

120

Save

localhost8082/index

Home Link Link Disabled Patients [Username]

Liste des patients

key word Chercher

ID	Nom	Data	Malade	Score		
16	hanann	2022-03-26	true	320	Delete	Edit
17	Asmaa	2022-03-26	true	120	Delete	Edit
18	hayat	2022-03-26	true	321	Delete	Edit
19	janat	2022-03-26	false	65	Delete	Edit
22	hayat	2022-03-26	true	321	Delete	Edit

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

46 47 48

Modifier un patient :

localhost8082/user/index?page=0&keyword=

Home Link Link Disabled Patients mohamed

Liste des patients

key word Chercher

ID	Nom	Data	Malade	Score		
18	hayat	2022-03-26	true	321	Delete	Edit
19	janat	2022-03-26	false	65	Delete	Edit
22	hayat	2022-03-26	true	321	Delete	Edit
23	janat	2022-03-26	false	65	Delete	Edit
24	hanae	2022-03-26	true	32	Delete	Edit

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

46 47 48 49 50

Form Patients

localhost:8082/admin/editPatient?id=18&keyword=&page=0

WhatsBot WhatsBot en ligne bousmah.freecluste... Connexion — The...

Home Link Link Disabled Patients mohamed

ID 18
 Nom hayat
 Date de Naissance 26/03/2022
 Malade ☒
 Score 321
 Save

localhost:8082/user/index?page=0&keyword=

WhatsBot WhatsBot en ligne bousmah.freecluste... Connexion — The...

Home Link Link Disabled Patients mohamed

Liste des patients

key word Chercher

ID	Nom	Date	Malade	Score		
18	hayate	2022-03-26	true	570	Delete	Edit
19	janat	2022-03-26	false	65	Delete	Edit
22	hayat	2022-03-26	true	321	Delete	Edit
23	janat	2022-03-26	false	65	Delete	Edit
24	hanae	2022-03-26	true	32	Delete	Edit

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45
 46 47 48 49 50



Partie3 :

1- Ajouter la dépendance Maven de spring Security

localhost:8082/login

WhatsBot WhatsBot en ligne bousmah.freecluste... Connexion — The...

Please sign in

Username

Password

Sign in

```

Run: Jeetp3Application x
Console
2022-04-08 23:10:12.640 WARN 12328 --- [main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore
2022-04-08 23:10:14.616 WARN 12328 --- [main] .s.s.UserDetailsServiceAutoConfiguration :

Using generated security password: 45f99a5a-9aba-45db-a4f2-acd4f72d25a4

This generated password is for development use only. Your security configuration must be updated before running your application in production.

2022-04-08 23:10:14.817 INFO 12328 --- [main] o.s.s.web.DefaultSecurityFilterChain : Will not secure any request
2022-04-08 23:10:15.086 INFO 12328 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8082 (http) with context path
2022-04-08 23:10:15.133 INFO 12328 --- [main] ma.emsi.jeetp3.Jeetp3Application : Started Jeetp3Application in 42.226 seconds (JVM running
2022-04-08 23:10:15.385 INFO 12328 --- [nio-8082-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
2022-04-08 23:10:15.386 INFO 12328 --- [nio-8082-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2022-04-08 23:10:15.387 INFO 12328 --- [nio-8082-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 1 ms
Hibernate: select patient0_.id as id1_0_, patient0_.date_naissance as date_na12_0_, patient0_.malade as malade3_0_, patient0_.nom as nom4_0_, patient0_.score

```

2-Personnaliser la configuration de spring Security pour ajouter les restrictions suivantes avec la stratégie InMemoryAuthentication :

- **Authentification avec le rôle ADMIN pour pouvoir Ajouter, Editer, mettre à jour et supprimer les patients**

Titre x +

localhost:8082/index

WhatsBot WhatsBot en ligne bousmah.freecluste... Connexion — The...

Home Link Link Disabled Patients admin

Liste des patients

key word Chercher

ID	Nom	Data	Malade	Score		
16	hanann	2022-03-26	true	320	Delete	Edit
17	Asmaa	2022-03-26	true	120	Delete	Edit
18	hayat	2022-03-26	true	321	Delete	Edit
19	janat	2022-03-26	false	65	Delete	Edit
22	hayat	2022-03-26	true	321	Delete	Edit

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

46 47 48

- **Authentification avec le rôle USER pour pouvoir consulter les patients**

Titre x +

localhost:8082/index

WhatsBot WhatsBot en ligne bousmah.freecluste... Connexion — The...

Home Link Link Disabled Patients user1

Liste des patients

key word Chercher

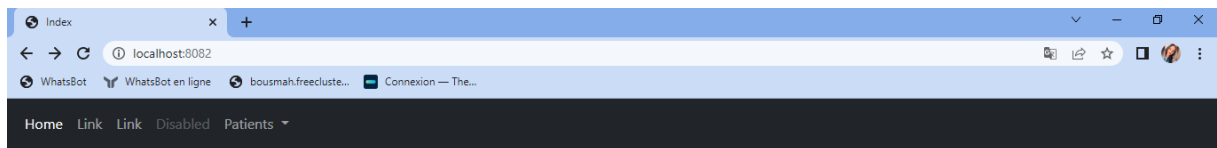
ID	Nom	Data	Malade	Score
16	hanann	2022-03-26	true	320
17	Asmaa	2022-03-26	true	120
18	hayat	2022-03-26	true	321
19	janat	2022-03-26	false	65
22	hayat	2022-03-26	true	321

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

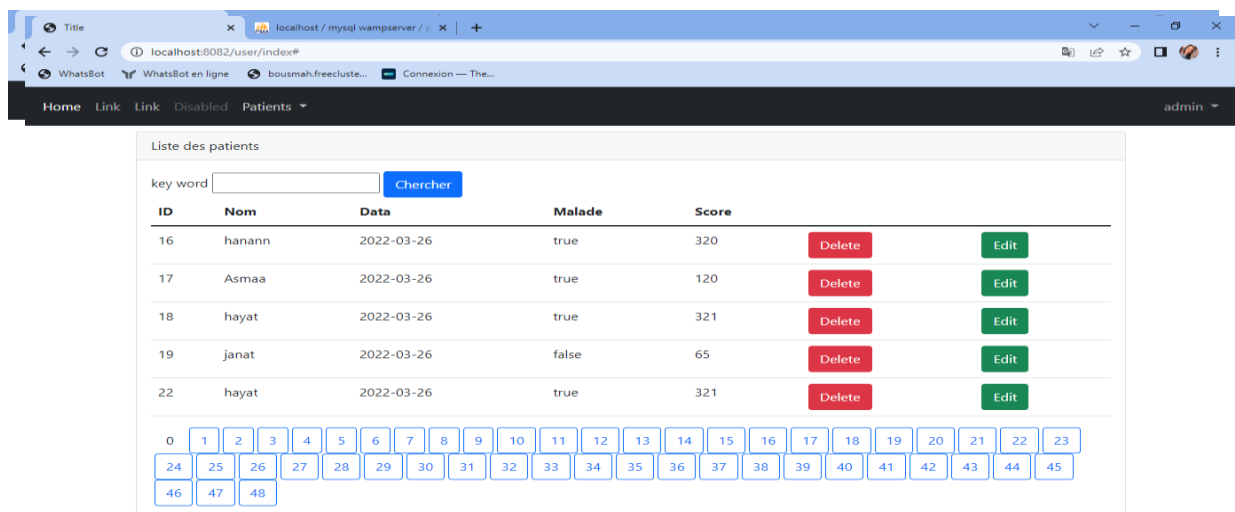
46 47 48

➤ Permettre l'accès aux ressources statique(/web/jars/**) sans aucune authentification

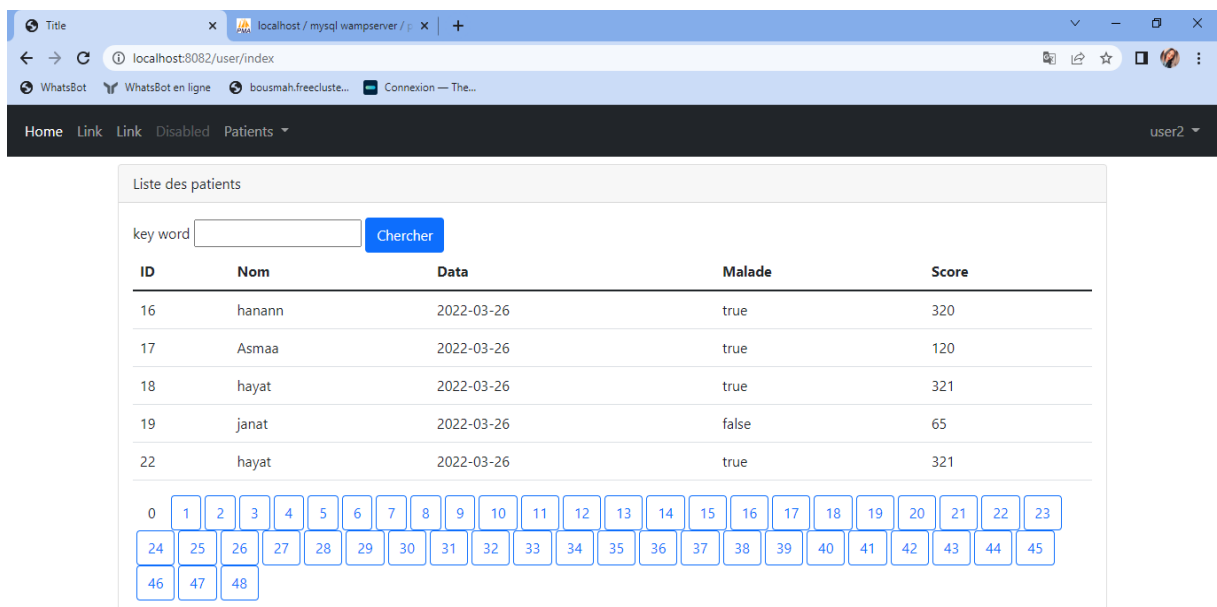


3-Basculer de la stratégie InMemoryAuthentication vers JDBCAuthentication :

➤ Admin :



➤ User :



localhost / mysql wampserver / < x +

localhost/phpmyadmin/#PMAURL=1:sql.php?db=dbp&table=patient&server=1&target=&token=cb6aa3527ffc5ad49b73a83f7e3844c1

phpMyAdmin

(Tables récentes) ...

- Nouvelle base de données
- asmaa_khoumani
- dbp
- Nouvelle table
- patient
- e-commerce
- eboutique
- information_schema
- khoumani_asmaa
- mydb
- mysql
- performance_schema
- test
- whatsbot

Serveur: mysql wampserver » Base de données: dbp » Table: patient

Afficher Structure SQL Rechercher Insérer Exporter Importer Privileges

Affichage des lignes 0 - 24 (total de 99, Traitement en 0.0012 sec)

SELECT * FROM 'patient'

Profilage [En ligne] [Modifier] [Expliq

1 Tout afficher > >> Nombre de lignes : 25

Trier sur l'index: Aucune

+ Options

		id	date_naissance	malade	nom	score				
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	2	2022-03-20	1	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	3	2022-03-20	1	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	4	2022-03-20	1	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	5	2022-03-20	1	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	6	2022-03-20	1	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	7	2022-03-20	0	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	8	2022-03-20	1	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	9	2022-03-20	0	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	10	2022-03-20	0	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	11	2022-03-20	0	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	12	2022-03-20	1	asmaa	50
<input type="checkbox"/>	Modifier	<input type="checkbox"/>	Copier	<input type="checkbox"/>	Effacer	13	2022-03-20	1	asmaa	50

4-Basculer vers la stratégie User Details Service :

localhost:8082/user/index

WhatsBot WhatsBot en ligne bousmah.freecluste... Connexion — The...

Home Link Link Disabled Patients mohamed

Liste des patients

key word Chercher

ID	Nom	Data	Malade	Score		
16	hanann	2022-03-26	true	320	Delete	Edit
17	Asmaa	2022-03-26	true	120	Delete	Edit
18	hayat	2022-03-26	true	321	Delete	Edit
19	janat	2022-03-26	false	65	Delete	Edit
22	hayat	2022-03-26	true	321	Delete	Edit

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

46 47 48

localhost:8082/user/index

WhatsBot WhatsBot en ligne bousmah.freecluste... Connexion — The...

Home Link Link Disabled Patients hassan

Liste des patients

key word Chercher

ID	Nom	Data	Malade	Score
16	hanann	2022-03-26	true	320
17	Asmaa	2022-03-26	true	120
18	hayat	2022-03-26	true	321
19	janat	2022-03-26	false	65
22	hayat	2022-03-26	true	321

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 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

46 47 48