

# Implémentation et déploiement d'une Servlet Java sur le Web Server Apache Tomcat

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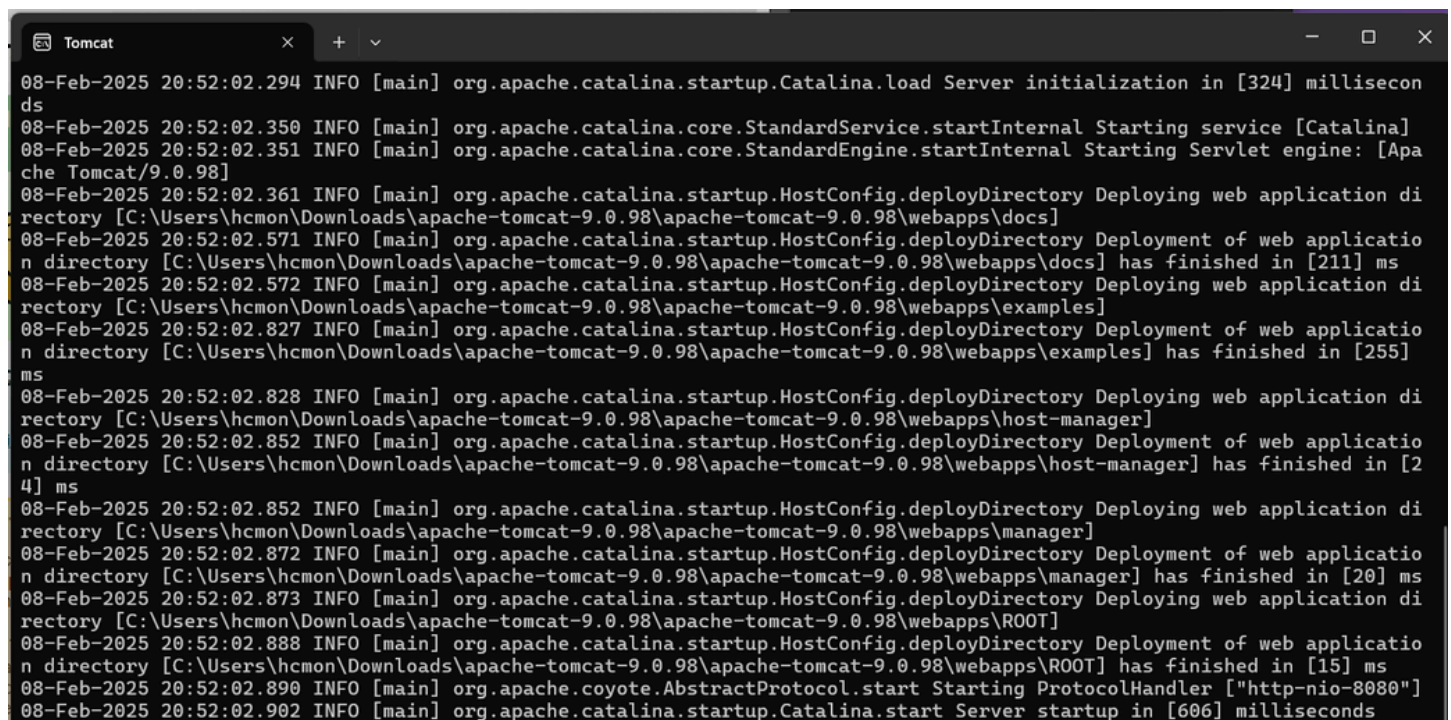
**Cours :** 020ENDES4 - Applications Distribuées

## Software and Versions Used:

- **Apache Tomcat:** Version 9.0.98
- **Java:** Version 23 (JDK 23)
- **Operating System:** Windows 11
- **IntelliJ IDEA Ultimate:** Latest version used for code development and compilation

## Objective:

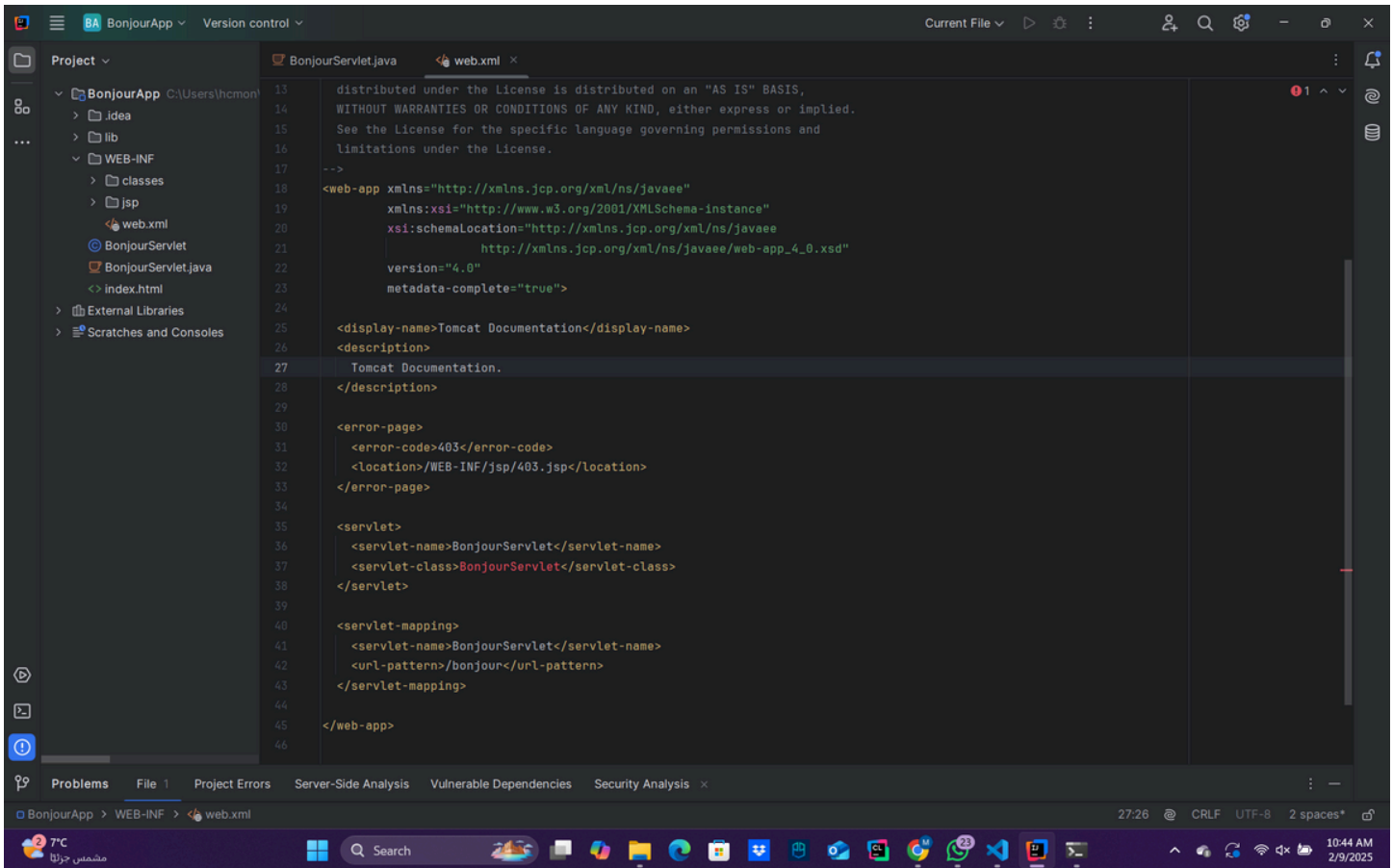
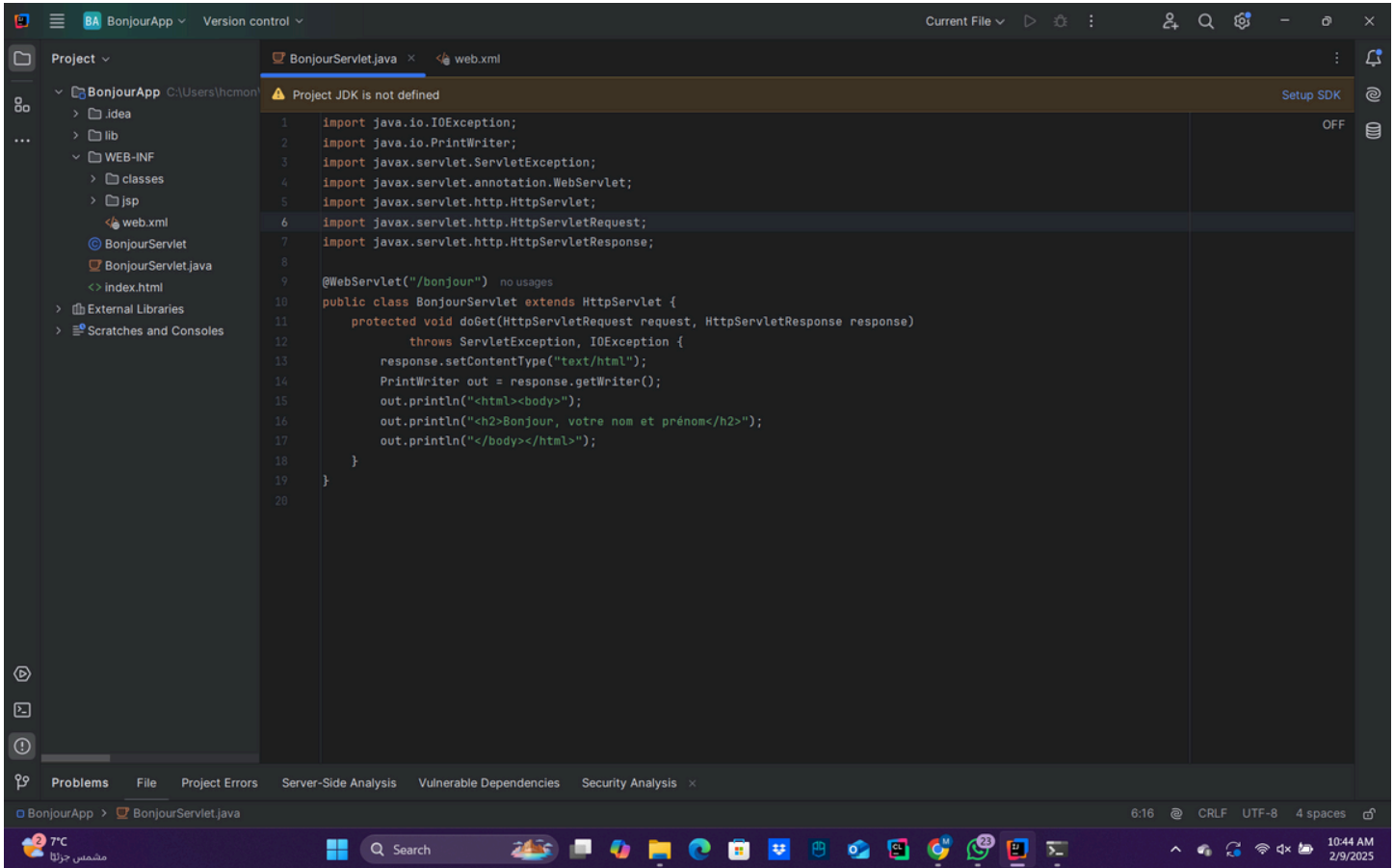
The goal of this assignment was to implement and deploy a simple servlet (BonjourServlet) in a web application (BonjourApp) using Apache Tomcat.



```
Tomcat
08-Feb-2025 20:52:02.294 INFO [main] org.apache.catalina.startup.Catalina.load Server initialization in [324] milliseconds
08-Feb-2025 20:52:02.350 INFO [main] org.apache.catalina.core.StandardService.startInternal Starting service [Catalina]
08-Feb-2025 20:52:02.351 INFO [main] org.apache.catalina.core.StandardEngine.startInternal Starting Servlet engine: [Apache Tomcat/9.0.98]
08-Feb-2025 20:52:02.361 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\docs]
08-Feb-2025 20:52:02.571 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\docs] has finished in [211] ms
08-Feb-2025 20:52:02.572 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\examples]
08-Feb-2025 20:52:02.827 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\examples] has finished in [255] ms
08-Feb-2025 20:52:02.828 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\host-manager]
08-Feb-2025 20:52:02.852 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\host-manager] has finished in [24] ms
08-Feb-2025 20:52:02.852 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\manager]
08-Feb-2025 20:52:02.872 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\manager] has finished in [20] ms
08-Feb-2025 20:52:02.873 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\ROOT]
08-Feb-2025 20:52:02.888 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web application directory [C:\Users\hcm\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\ROOT] has finished in [15] ms
08-Feb-2025 20:52:02.890 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["http-nio-8080"]
08-Feb-2025 20:52:02.902 INFO [main] org.apache.catalina.startup.Catalina.start Server startup in [606] milliseconds
```

## Setup and Configuration:

- I created a BonjourServlet.java file with the necessary servlet code to display a "Hello" message.
- The servlet was mapped in the web.xml file under the WEB-INF directory of the BonjourApp web application.



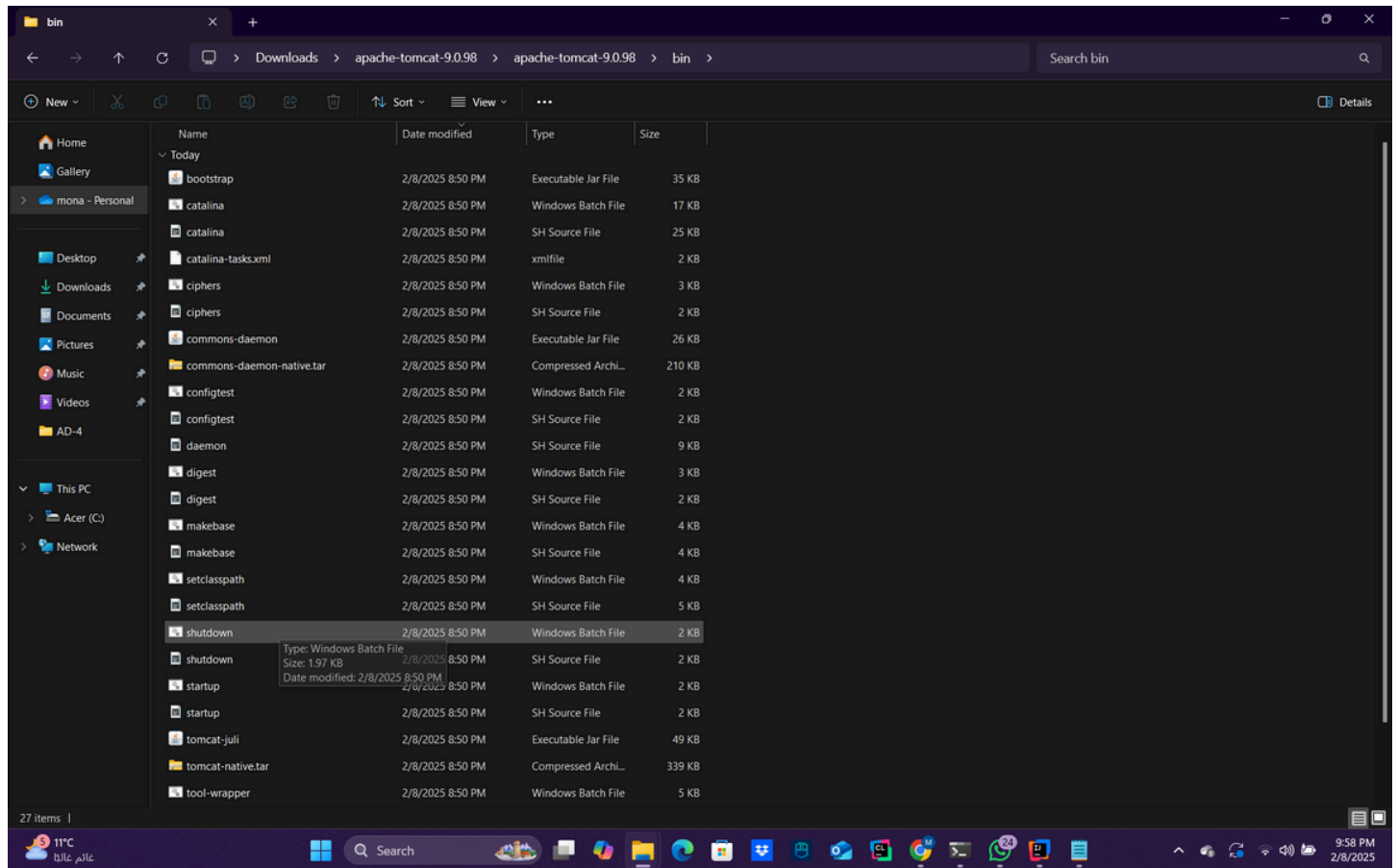
## Issue Encountered:

- Initially, when accessing the servlet through `http://localhost:8080/BonjourApp/bonjour`, I encountered an error where Tomcat could not resolve the `BonjourServlet` class.

## Resolution:

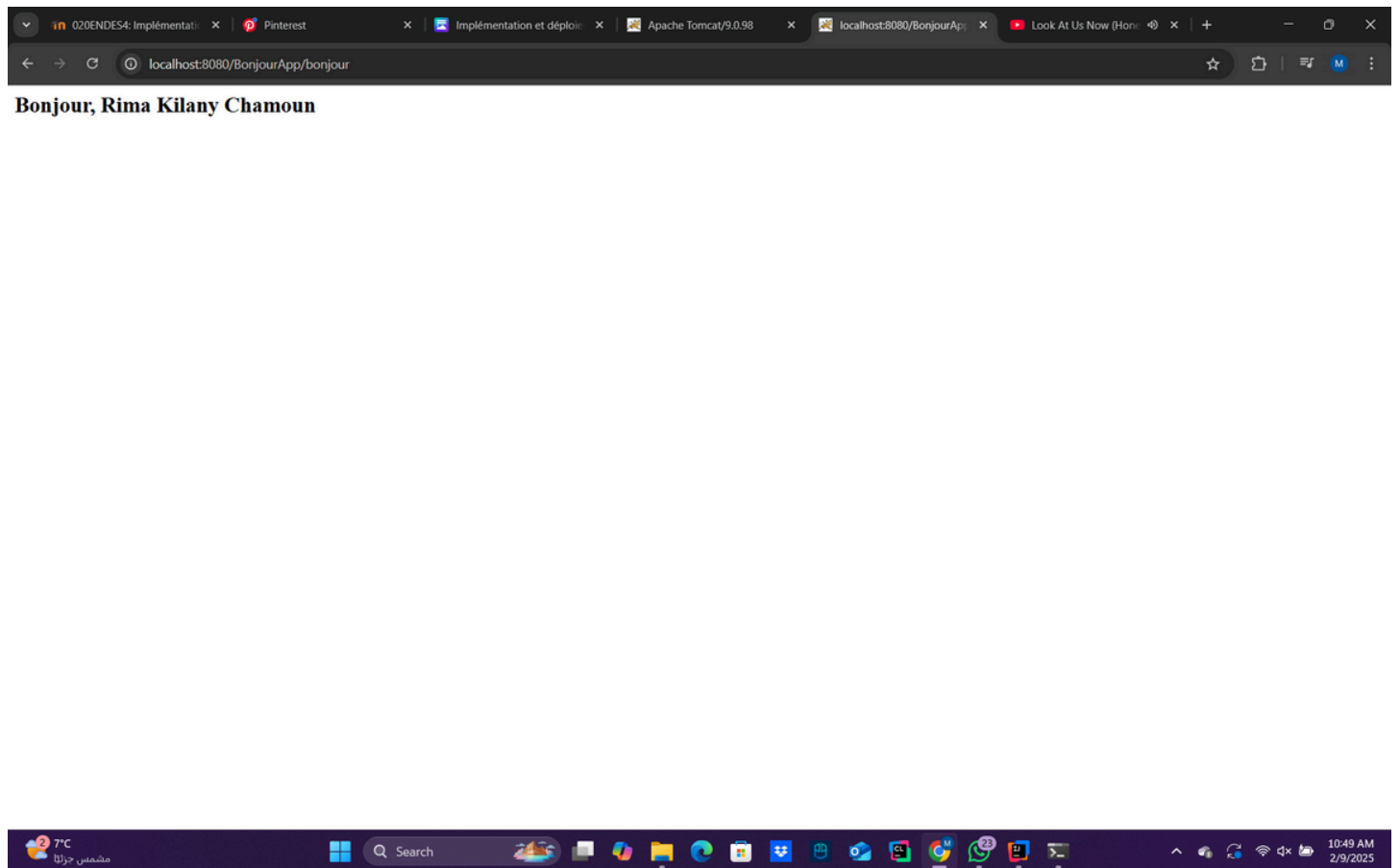
- After troubleshooting, I ensured that the compiled BonjourServlet.class file was placed in the correct directory:  
C:\tomcat\webapps\BonjourApp\WEB-INF\classes (or  
/opt/tomcat/webapps/BonjourApp/WEB-INF/classes for Linux).
- I also checked that the servlet's fully qualified class name was correctly defined in the web.xml file.

nous avons placé le fichier BonjourServlet.class dans le répertoire C:\Users\hcmom\Downloads\apache-tomcat-9.0.98\apache-tomcat-9.0.98\webapps\BonjourApp\WEB-INF\classes



## Verification:

- I restarted the Tomcat server, both shutting it down and starting it again using shutdown.bat and startup.bat on Windows.
- After the restart, I successfully accessed the servlet via <http://localhost:8080/BonjourApp/bonjour> and saw the expected "Hello" message.



## Conclusion:

- The servlet was successfully configured and deployed.

## Files Structure :

C:\tomcat\webapps\BonjourApp\

```
├─ index.html      (Accueil page)
├─ WEB-INF/
│   └─ web.xml      (Servlet configuration)
│   └─ classes/
│       └─ BonjourServlet.class (Compiled servlet)
│       └─ lib/      (Optional additional libraries)
```