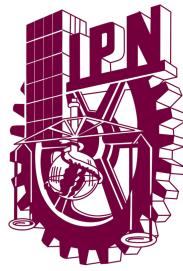


Tarea 1.- Herramientas para el desarrollo de proyectos de Software



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Instalación y Configuración Spring Boot & Maven

Primero se verifica la existencia de una instalación previa de Java, ya que se había instalado anteriormente. Para esta verificación se utiliza el siguiente comando.

```
java --version
```

Al ingresar el comando, se obtiene la siguiente salida que confirma que Java ya está instalado previamente.

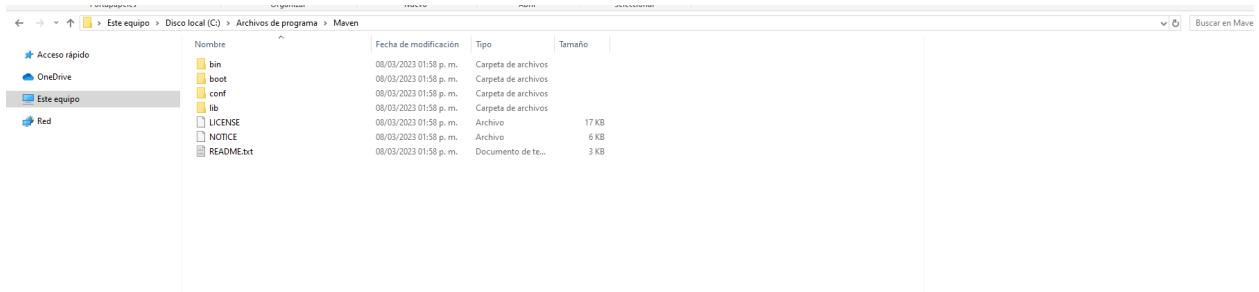
```
C:\Users\Gabriel1818>java --version
java 21.0.5 2024-10-15 LTS
Java(TM) SE Runtime Environment (build 21.0.5+9-LTS-239)
Java HotSpot(TM) 64-Bit Server VM (build 21.0.5+9-LTS-239, mixed mode, sharing)
```

A continuación, se descarga el archivo ZIP desde el sitio oficial de Maven para realizar su instalación.

The screenshot shows the Apache Maven Project download page. At the top, there's a logo for the Apache Maven Project and a large 'Maven' logo. Below the header, there's a navigation bar with links like 'Apache', 'Maven', 'Download Apache Maven', 'Download', 'Get Sources', and 'Last Published: 2025-02-19'. The main content area has sections for 'Welcome', 'License', 'ABOUT MAVEN', 'What is Maven?', 'Features', 'Download' (which is highlighted), 'Use', 'Release Notes', 'DOCUMENTATION', 'Maven Plugins', 'Maven Extensions', 'Maven Tools', 'Index (category)', 'User Centre', 'Plugin Developer Centre', 'Maven Repository Centre', 'Maven Developer Centre', 'Books and Resources', 'Security', 'COMMUNITY', 'Community Overview', 'Project Roles', 'How to Contribute', 'Getting Help', 'Issue Management', 'Getting Maven Source', 'The Maven Team', and 'PRODUCT DOCUMENTATION'. The 'Download' section contains a heading 'Downloading Apache Maven 3.9.9' with a note that it's the latest release. It includes a 'System Requirements' table and a 'Files' table. The 'Files' table lists four archive types: Binary tar.gz archive, Binary zip archive, Source tar.gz archive, and Source zip archive, each with its corresponding link, checksums, and signature.

Link	Checksums	Signature
apache-maven-3.9.9-bin.tar.gz	apache-maven-3.9.9-bin.tar.gz.sha512	apache-maven-3.9.9-bin.tar.gz.asc
apache-maven-3.9.9-bin.zip	apache-maven-3.9.9-bin.zip.sha512	apache-maven-3.9.9-bin.zip.asc
apache-maven-3.9.9-src.tar.gz	apache-maven-3.9.9-src.tar.gz.sha512	apache-maven-3.9.9-src.tar.gz.asc
apache-maven-3.9.9-src.zip	apache-maven-3.9.9-src.zip.sha512	apache-maven-3.9.9-src.zip.asc

Una vez se descarga el archivo .zip de Maven, se procede con la instalación descomprimiéndolo en la carpeta de archivos de programa.



Seguido de eso se anexa el bin de Maven a las variables de entorno del dispositivo

```
C:\Program Files\Microsoft SQL Server\120\DTS\Binn\  
C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\110\Tool...  
C:\Program Files (x86)\Microsoft SQL Server\120\Tools\Binn\  
C:\Program Files\Microsoft SQL Server\120\Tools\Binn\  
C:\Program Files (x86)\Microsoft SQL Server\120\Tools\Binn\Mana...  
C:\Program Files (x86)\Microsoft SQL Server\120\DTSDTS\Binn\  
C:\Program Files\Maven\bin
```

Se continua con la comprobación de la instalación de Maven dentro del dispositivo, aplicamos el siguiente código.

```
mvn --version
```

Y de esta manera se obtiene la versión de Maven comprobando que ya está instalado en el dispositivo.

```
C:\Users\Gabriel1818>mvn --version  
Apache Maven 3.8.8 (4c87b05d9aedc574290d1acc98575ed5eb6cd39)  
Maven home: C:\Program Files\Maven  
Java version: 21.0.5, vendor: Oracle Corporation, runtime: C:\Program Files\Java\jdk-21  
Default locale: es_MX, platform encoding: UTF-8  
OS name: "windows 10", version: "10.0", arch: "amd64", family: "windows"
```

Una vez se realizan todas las instalaciones podemos empezar la creación y levantamiento de nuestro proyecto, a continuación se anexa la captura de la consola de spring ya en funcionamiento.

```

Downloaded from central: https://repo.maven.apache.org/maven2/commons-io/2.13.0/commons-io-2.13.0.jar (484 kB at 319 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-collections4/4.4/commons-collections4-4.4.jar (752 kB at 468 kB/s)
[INFO] Attaching agents: []

[INFO] 
[INFO] --- spring-boot-maven-plugin:2.3.4.RELEASE:run (default-cli) @ spring ---
[INFO] 
:: Spring Boot ::   (v3.4.2)

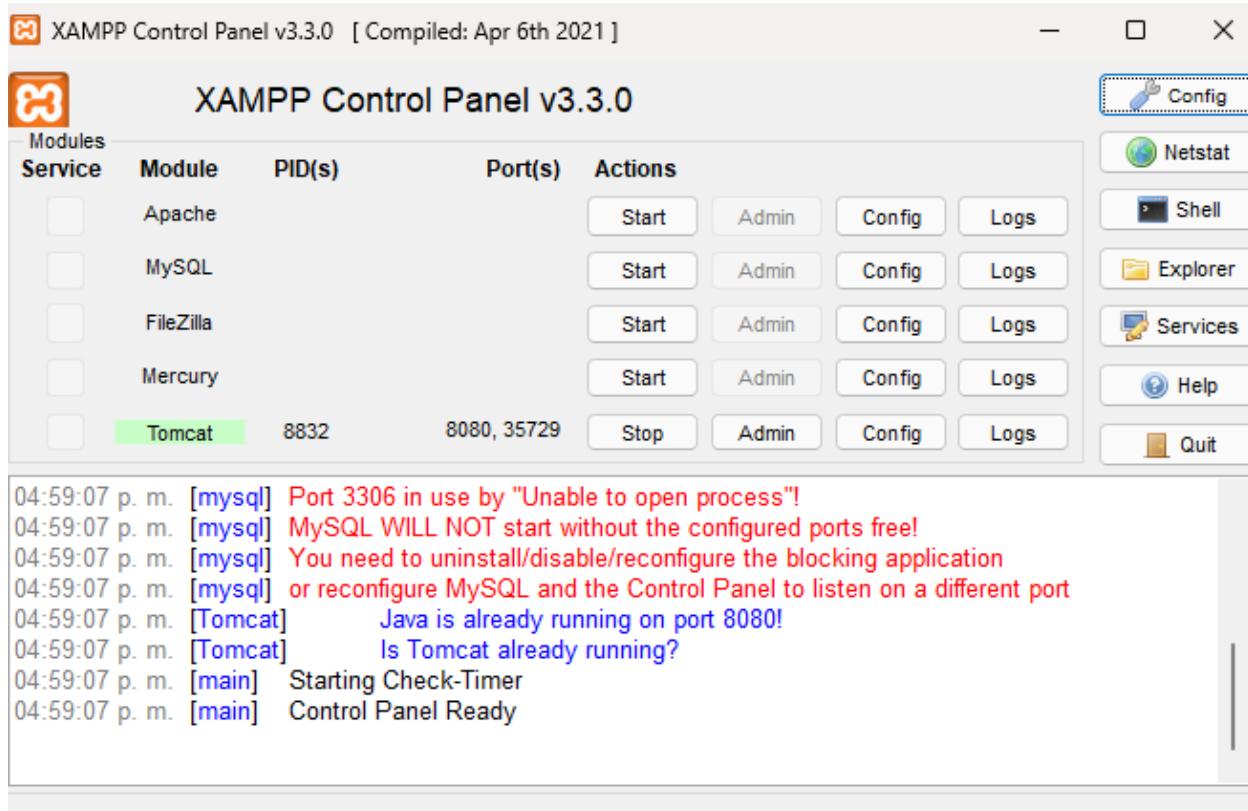
2025-02-19T12:22:53.465+00:00  INFO 1648 --- [spring] [ restartedMain] com.example.spring.Application      : Starting Application using Java 21.0.5 with PID 1648 (C:\Users\Gabriel1818\Documents\Springboot\spring\target\classes started by gabriel1818 in C:\Users\Gabriel1818)
2025-02-19T12:22:53.465+00:00  INFO 1648 --- [spring] [ restartedMain] com.example.spring.Application      : No active profile set, falling back to 1 default profile: "default"
2025-02-19T12:22:53.525+00:00  INFO 1648 --- [spring] [ restartedMain] e.DevToolsPropertyDefaultsPostProcessor : DevTools property defaults active. Set 'spring.devtools.add-properties' to 'false' to disable
2025-02-19T12:22:54.000+00:00  INFO 1648 --- [spring] [ restartedMain] s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data repository scanning in DEFAULT mode.
2025-02-19T12:22:54.249+00:00  INFO 1648 --- [spring] [ restartedMain] s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 11 ms. Found 0 JPA repository interfaces.
2025-02-19T12:22:54.250+00:00  INFO 1648 --- [spring] [ restartedMain] o.s.d.r.i.RepositoryInfoLogger       : Logging level 'INFO' is currently in effect
2025-02-19T12:22:54.859+00:00  INFO 1648 --- [spring] [ restartedMain] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2025-02-19T12:22:54.859+00:00  INFO 1648 --- [spring] [ restartedMain] o.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/10.1.34]
2025-02-19T12:22:54.859+00:00  INFO 1648 --- [spring] [ restartedMain] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1427 ms
2025-02-19T12:22:54.977+00:00  INFO 1648 --- [spring] [ restartedMain] o.apache.catalina.core.StandardService : HikariPool-1 : Starting...
2025-02-19T12:22:55.000+00:00  INFO 1648 --- [spring] [ restartedMain] com.zaxxer.hikari.HikariDataSource : HikariPool-1 : Start completed.
2025-02-19T12:22:55.577+00:00  INFO 1648 --- [spring] [ restartedMain] org.hibernate.Version      : HHH000412: Hibernate ORM core version 6.3.0.Final
2025-02-19T12:22:55.656+00:00  INFO 1648 --- [spring] [ restartedMain] o.h.c.i.RegistrationInitiator    : HHH000026: Second-level cache disabled
2025-02-19T12:22:55.656+00:00  INFO 1648 --- [spring] [ restartedMain] o.h.p.p.SpringPersistenceUnitKey  : No LoadTimeWeaver setup; ignoring JPA class transformer
2025-02-19T12:22:56.174+00:00  INFO 1648 --- [spring] [ restartedMain] org.hibernate.cfg.Configuration : HikariDataSource connections pending

Database JDBC URL [Connecting through datasource]
Database driver: unknown
Database version: 2.3.232
Autocommit mode: undefined/unknown
Current connection count: 0
Maximum pool size: undefined/unknown
Minimum pool size: undefined/unknown

2025-02-19T12:22:56.174+00:00  INFO 1648 --- [spring] [ restartedMain] o.s.t.j.p.i.JtaPlatformInitiator  : HHH000450: No JTA platform available (set 'hibernate.transaction.jta.platform' to enable JTA platform integration)
2025-02-19T12:22:56.797+00:00  WARN 1648 --- [spring] [ restartedMain] jpaBaseConfiguration$JpaWebConfiguration : Initialized JPA EntityManagerFactory for persistence unit 'default'
2025-02-19T12:22:56.797+00:00  INFO 1648 --- [spring] [ restartedMain] spring.jpa.open-in-view           : Enabled. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view.
2025-02-19T12:22:57.114+00:00  INFO 1648 --- [spring] [ restartedMain] j.h.c.h2.H2ConsoleAutoConfiguration : H2 console available at '/h2-console'. Database available at 'jdbc:h2:mem:8888fd12-f1c8-49de-blbd-9987aa0f0043'.
2025-02-19T12:22:57.114+00:00  INFO 1648 --- [spring] [ restartedMain] o.s.b.a.OptionalLiveReloadServer  : LiveReload server is running on port 35729
2025-02-19T12:22:57.114+00:00  INFO 1648 --- [spring] [ restartedMain] o.s.b.a.OptionalLiveReloadServer  : LiveReload server context path: '/'
2025-02-19T12:22:57.243+00:00  INFO 1648 --- [spring] [ restartedMain] com.example.spring.Application  : Started Application in 4.214 seconds (process running for 4.679)
2025-02-19T12:23:12.658+00:00  INFO 1648 --- [nio-8880-exec-1] o.s.c.c.C.Tomcat@{[localhost]}     : Initializing Spring DispatcherServlet "dispatcherServlet"
2025-02-19T12:23:12.658+00:00  INFO 1648 --- [nio-8880-exec-1] o.s.web.servlet.DispatcherServlet  : Completed initialization in 0 ms

```

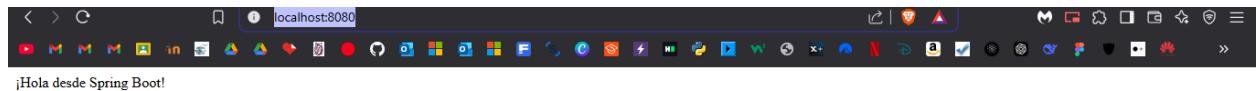
Como agregado se ingresa a la aplicación XAMP para poder verificar el estado de nuestro “localhost” el cual permitirá mostrar por completo el mensaje que se requiere.



Ya en funcionamiento, se dirige a la siguiente liga.

<http://localhost:8080/>

Una vez que se ingresa al enlace, se obtiene el siguiente resultado.



Se puede observar que el mensaje “¡Hola desde Spring Boot!” lo cual muestra que tanto el controlador y el despliegue de Spring funciona completamente.

Una vez que se visualiza el resultado en el navegador por ultimo se realiza una solicitud con Postman para verificar el cuerpo de la pagina, y se recibe lo siguiente.

The screenshot shows the Postman application interface. In the left sidebar, under 'My Workspace', there is a collection named 'My first collection' containing two folders: 'First folder inside collection' and 'Second folder inside collection'. Each folder contains several requests, mostly 'GET' type. On the right side, a specific request is selected with the URL 'http://localhost:8080/'. The 'Headers' tab shows six headers. The 'Body' tab displays the response body, which is a single line of text: '1 Hola desde Spring Boot!'. The status bar at the bottom indicates a 'Status: 200 OK' response.

De esta forma se tiene por completo el proyecto realizado en Spring Boot y se tiene una respuesta por completo.