

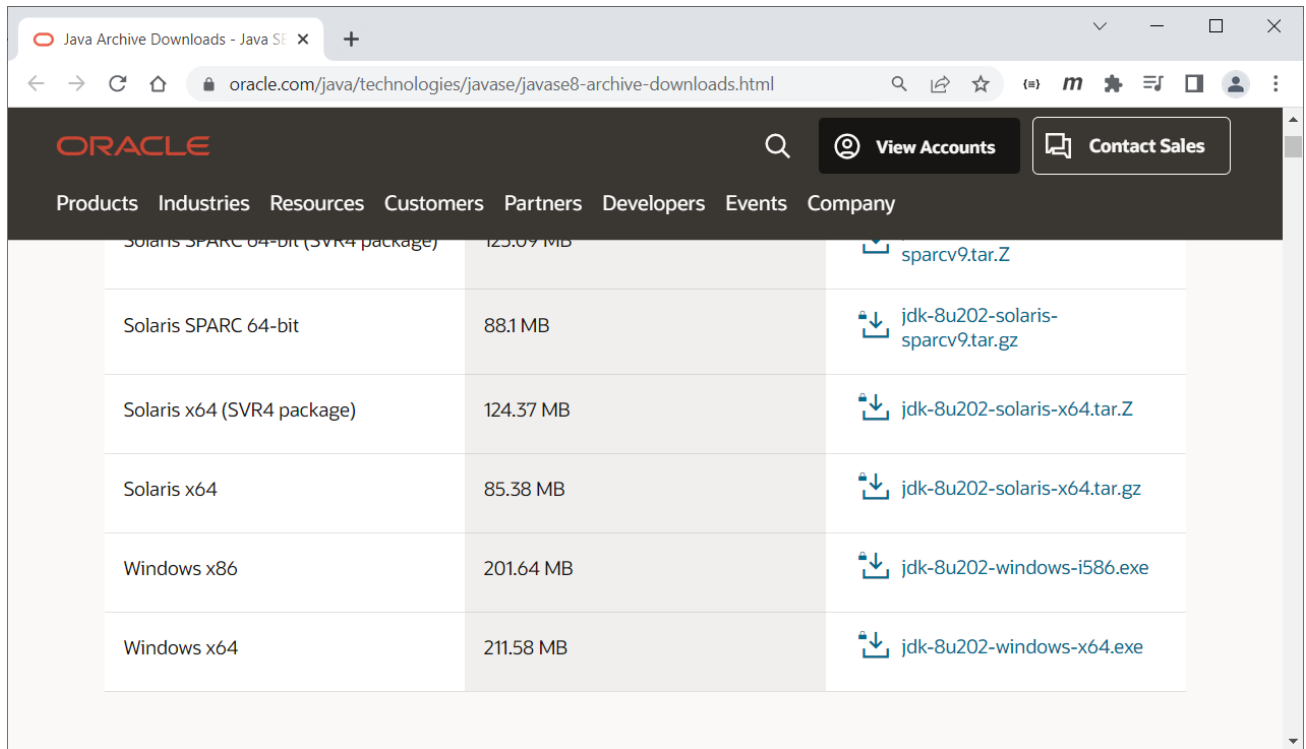
Installation Guide

Software Requirement

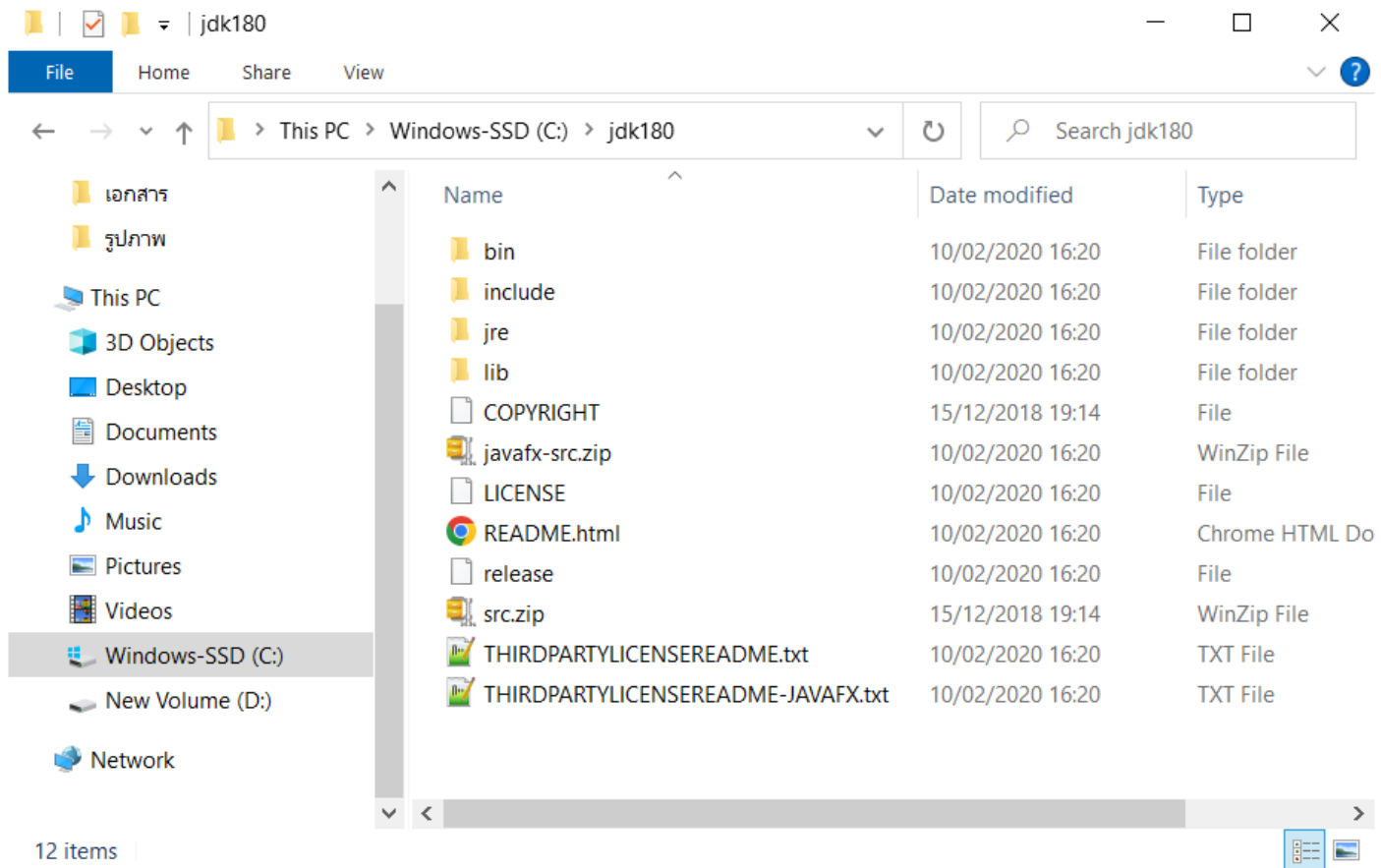
1. JDK 1.8
2. Tomcat 9
3. Editor ex. Notepad++, Visual Studio Code, Eclipse
4. MySQL (JDBC connect database)

Setup Step

1. Go to <https://www.oracle.com/java/technologies/javase/javase8-archive-downloads.html> download & install JDK depending on OS platform



We recommend to install under drive c: with short path ex. c:\jdk180



2. Try to examine that JDK is already work

```

Microsoft Windows [Version 10.0.19044.1889]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADMIN>java -version
java version "1.8.0_201"
Java(TM) SE Runtime Environment (build 1.8.0_201-b09)
Java HotSpot(TM) 64-Bit Server VM (build 25.201-b09, mixed mode)

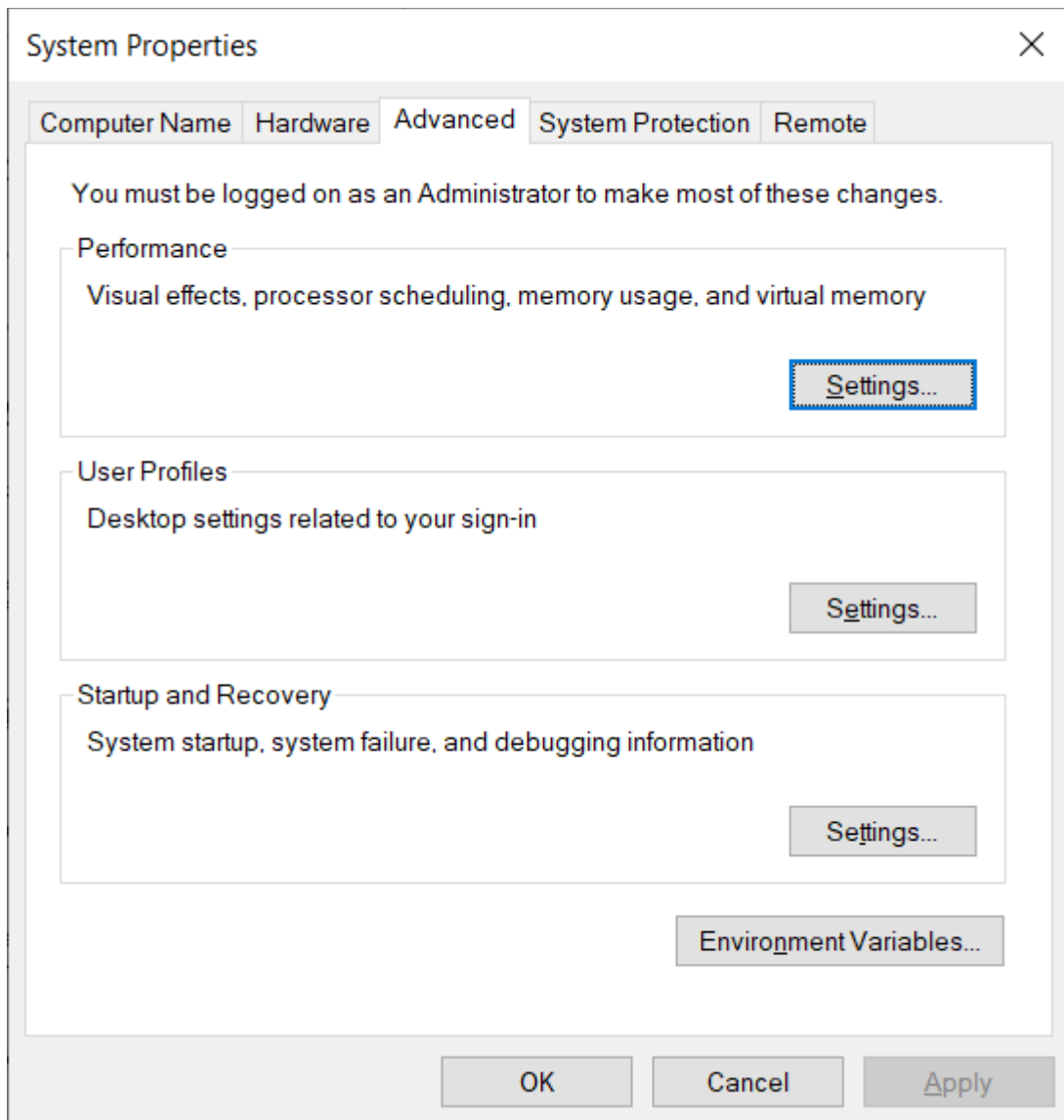
C:\Users\ADMIN>javac -version
javac 1.8.0_201

C:\Users\ADMIN>

```

If not work try to set PATH environment point to bin directory of JDK

Settings -> System -> About -> Advanced system settings -> Advanced -> Environment Variables



Environment Variables



User variables for ADMIN

Variable	Value
LANG	en
ONCONFIG	ONCONFIG.ol_ids_1150_1
OneDrive	C:\Users\ADMIN\OneDrive
OneDriveConsumer	C:\Users\ADMIN\OneDrive
Path	.;C:\Users\ADMIN\AppData\Local\activestate\cache\bin;C\Us...
TEMP	C:\Users\ADMIN\AppData\Local\Temp
TMP	C:\Users\ADMIN\AppData\Local\Temp

New...

Edit...

Delete

System variables

Variable	Value
ComSpec	C:\WINDOWS\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
MSMPI_BIN	C:\Program Files\Microsoft MPI\Bin\
NUMBER_OF_PROCESSORS	8
OS	Windows_NT
Path	C:\jdk180\bin;D:\InformixSDK\bin;C:\Program Files (x86)\ibm\...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

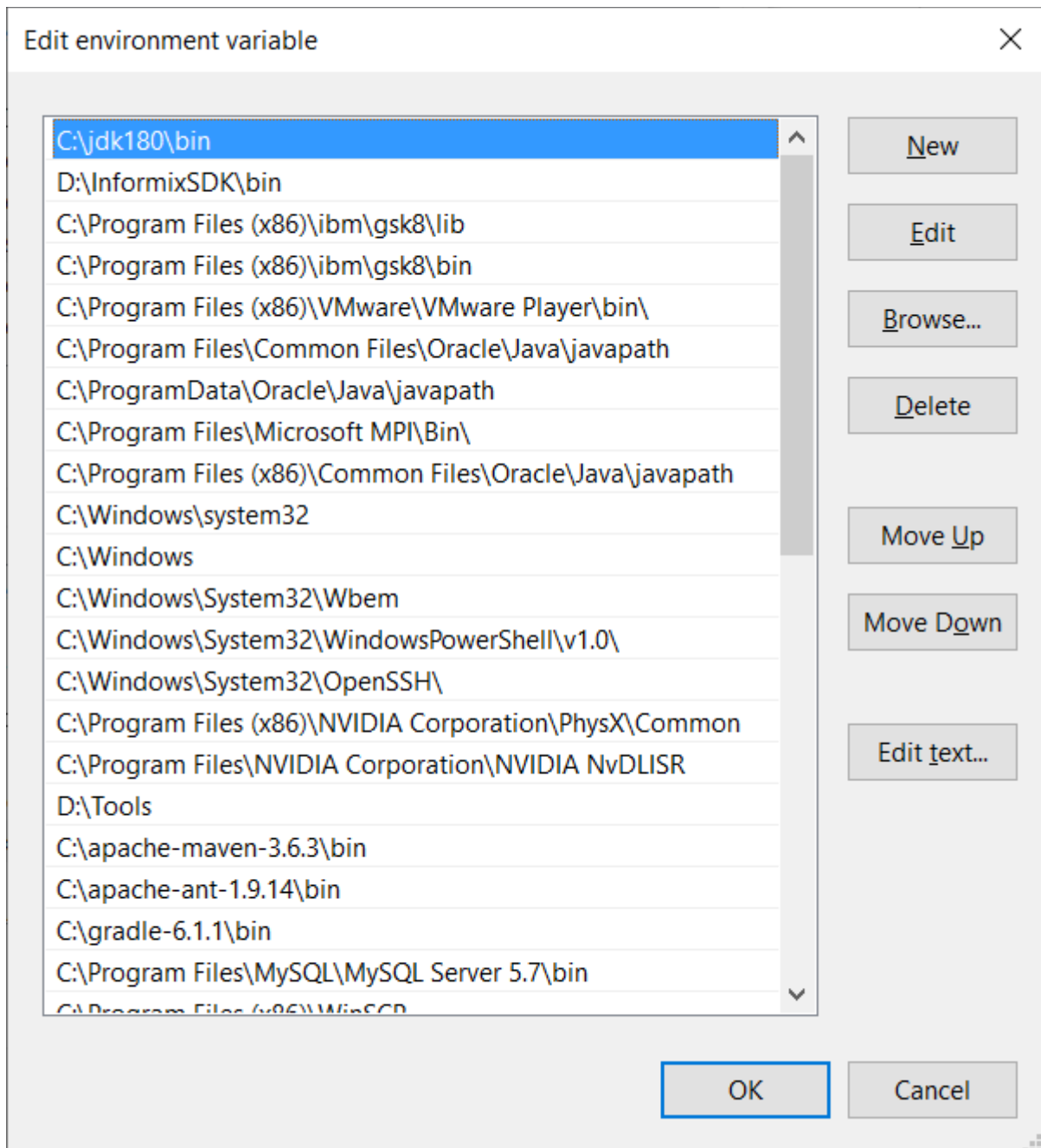
New...

Edit...

Delete

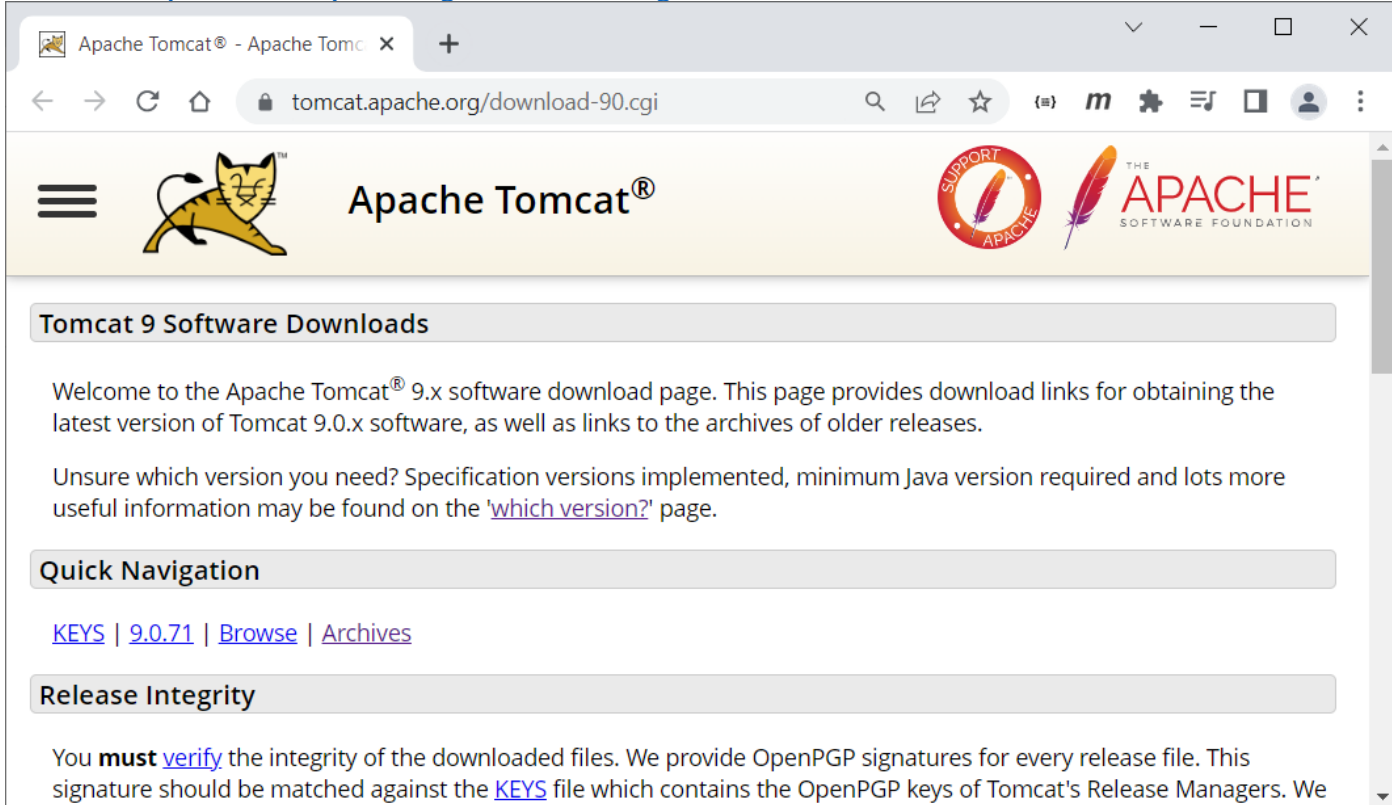
OK

Cancel



This make PATH environment point to bin directory where java.exe and javac.exe existed.

3. Go to <https://tomcat.apache.org/download-90.cgi> download & install



The screenshot shows the Apache Tomcat 9 Software Downloads page. The browser address bar displays tomcat.apache.org/download-90.cgi. The page header includes the Apache Tomcat logo and the Apache Software Foundation logo. The main content area is titled "Tomcat 9 Software Downloads" and contains the following text:

Welcome to the Apache Tomcat® 9.x software download page. This page provides download links for obtaining the latest version of Tomcat 9.0.x software, as well as links to the archives of older releases.

Unsure which version you need? Specification versions implemented, minimum Java version required and lots more useful information may be found on the ["which version?"](#) page.

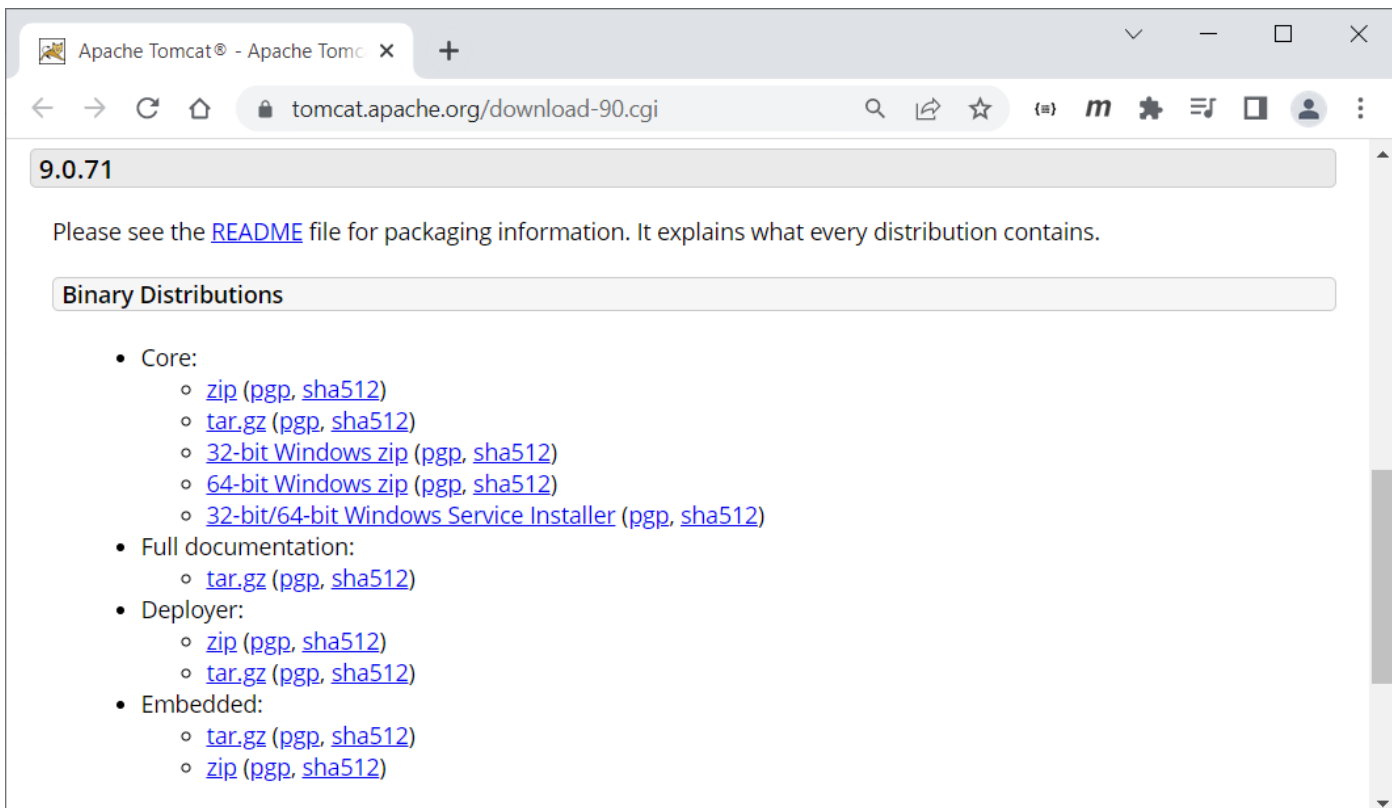
Quick Navigation

[KEYS](#) | [9.0.71](#) | [Browse](#) | [Archives](#)

Release Integrity

You **must** [verify](#) the integrity of the downloaded files. We provide OpenPGP signatures for every release file. This signature should be matched against the [KEYS](#) file which contains the OpenPGP keys of Tomcat's Release Managers. We

We recommend to download zip file ex. apache-tomcat-9.0.71.zip



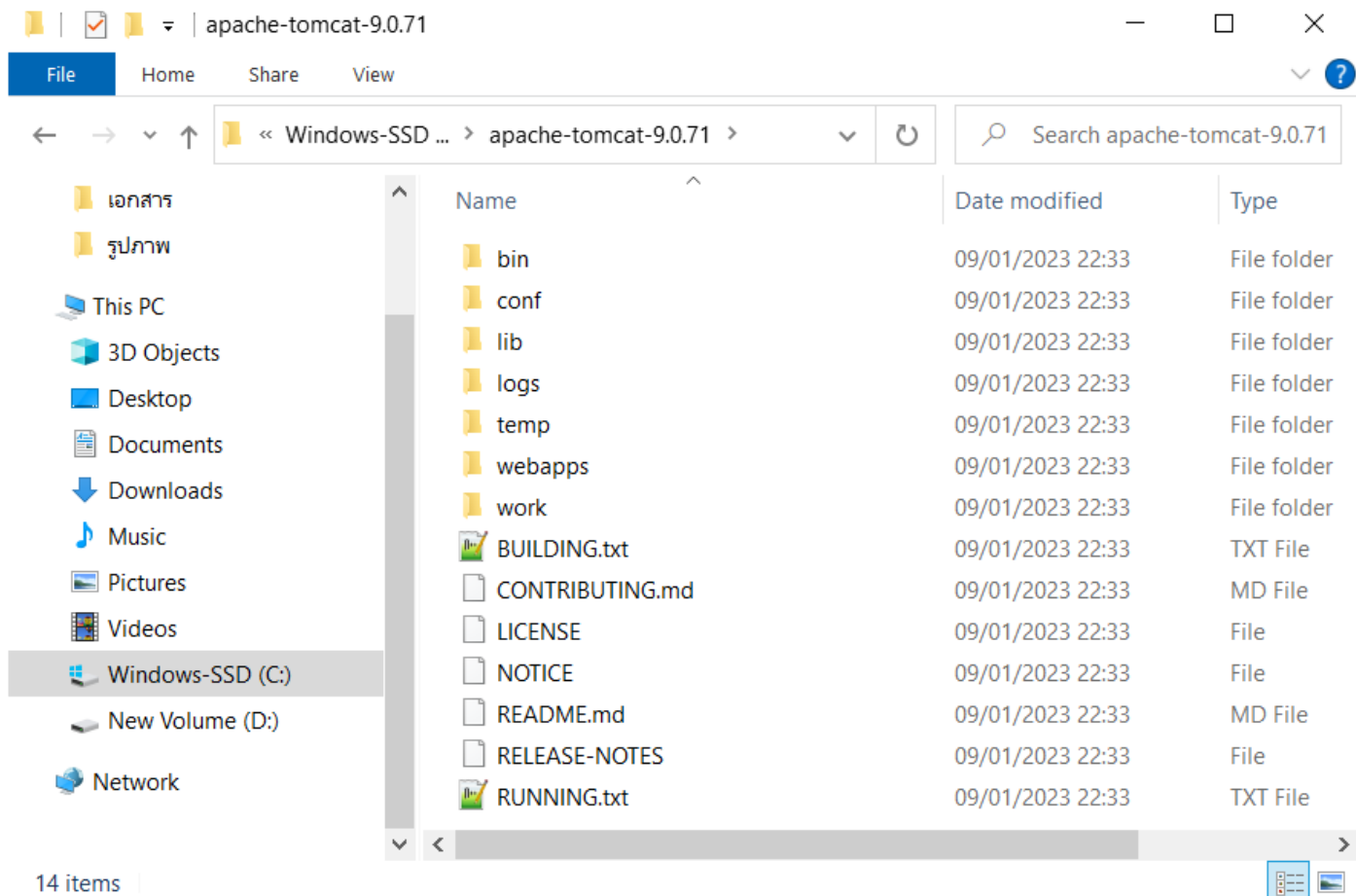
The screenshot shows the Apache Tomcat 9.0.71 Binary Distributions page. The browser address bar displays tomcat.apache.org/download-90.cgi. The page header includes the Apache Tomcat logo and the Apache Software Foundation logo. The main content area is titled "9.0.71" and contains the following text:

Please see the [README](#) file for packaging information. It explains what every distribution contains.

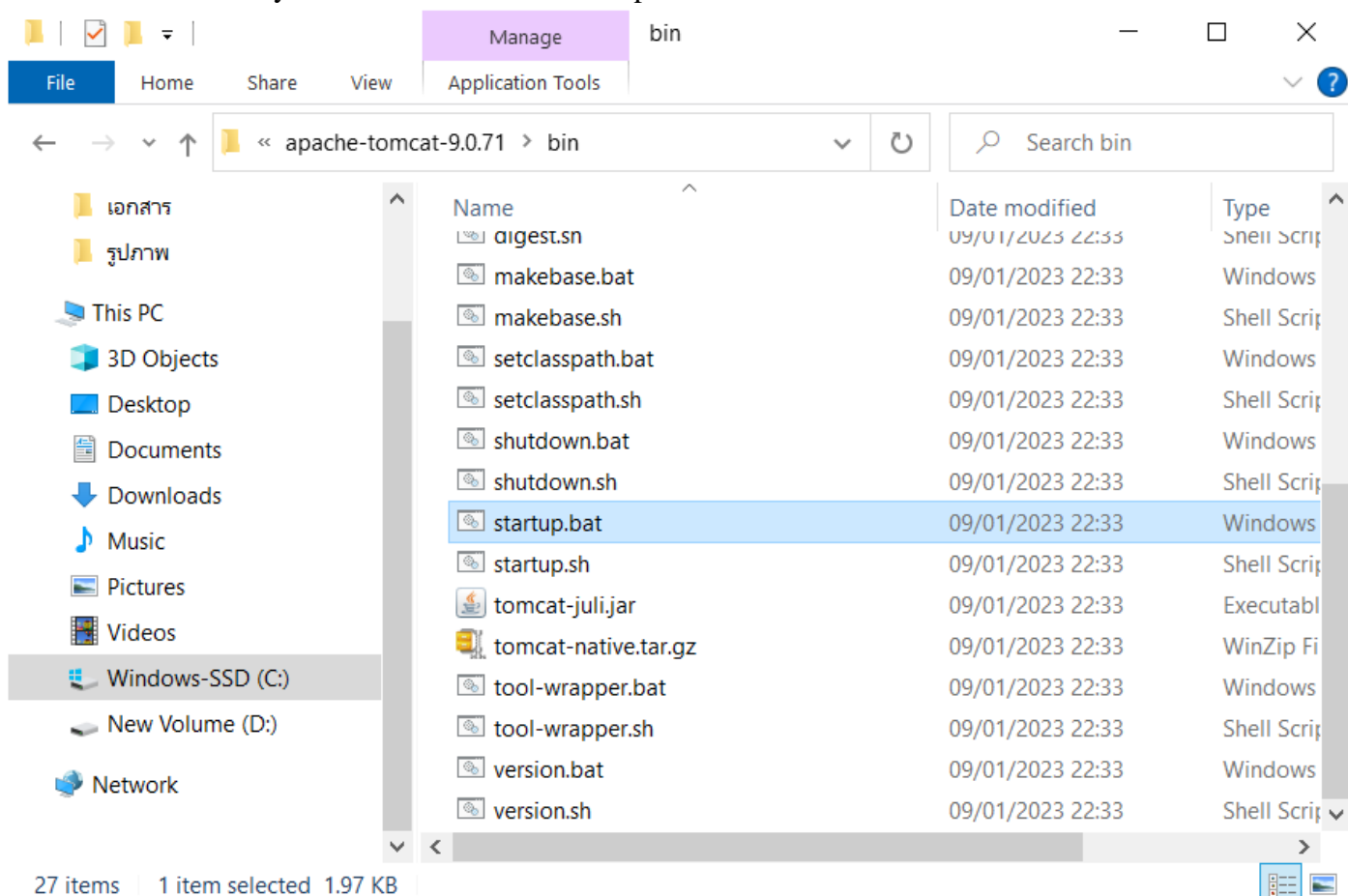
Binary Distributions

- Core:
 - [zip](#) ([pgp](#), [sha512](#))
 - [tar.gz](#) ([pgp](#), [sha512](#))
 - [32-bit Windows zip](#) ([pgp](#), [sha512](#))
 - [64-bit Windows zip](#) ([pgp](#), [sha512](#))
 - [32-bit/64-bit Windows Service Installer](#) ([pgp](#), [sha512](#))
- Full documentation:
 - [tar.gz](#) ([pgp](#), [sha512](#))
- Deployer:
 - [zip](#) ([pgp](#), [sha512](#))
 - [tar.gz](#) ([pgp](#), [sha512](#))
- Embedded:
 - [tar.gz](#) ([pgp](#), [sha512](#))
 - [zip](#) ([pgp](#), [sha512](#))

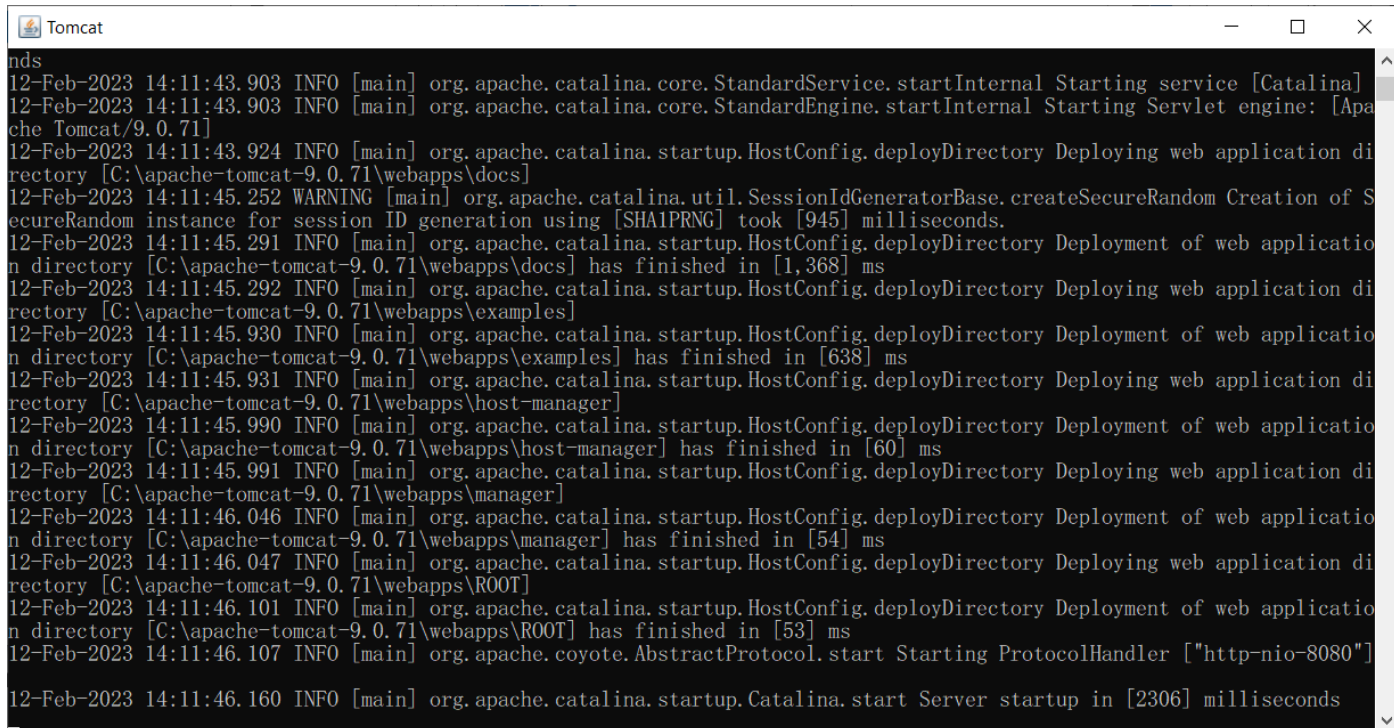
4. Try to extract or unzip tomcat zip file to your working directory ex. c:



5. Go to bin directory of tomcat and launch startup.bat

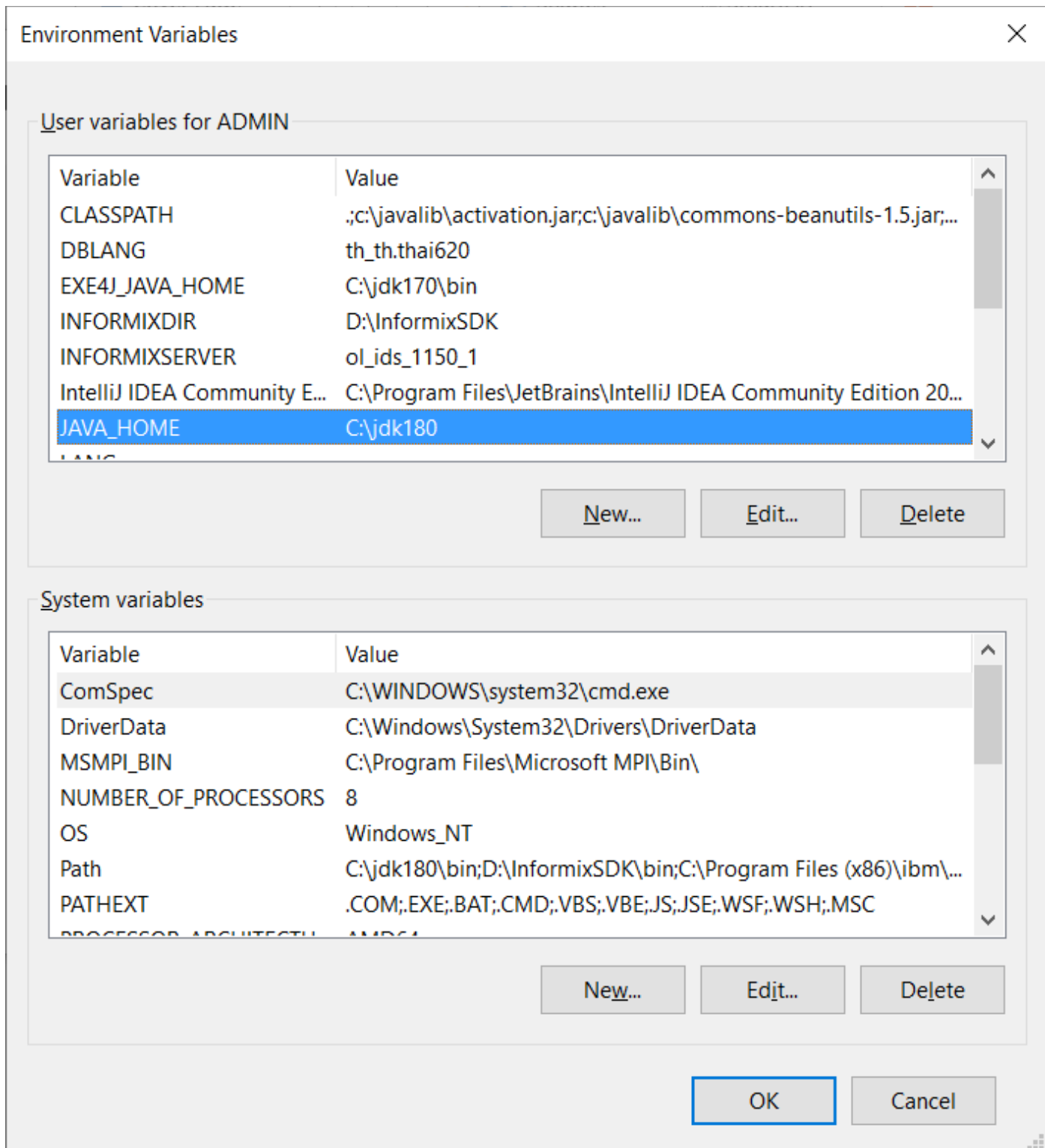


You will see console application running

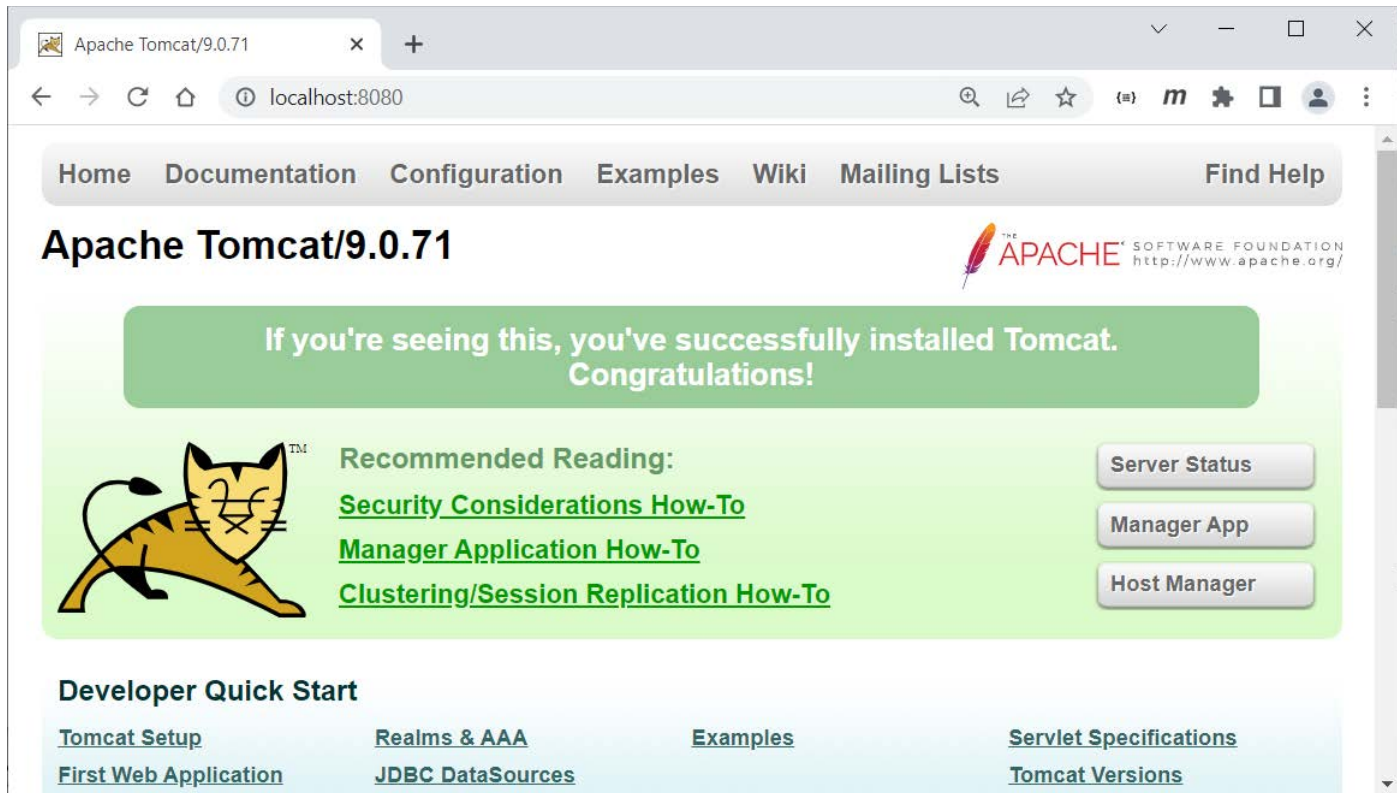
A screenshot of a Windows console window titled "Tomcat". The window displays a series of log messages from the Apache Tomcat startup process. The logs include timestamps, log levels (INFO, WARNING), and the names of the classes and methods being executed. The messages show the progression from starting the Catalina service to deploying various web applications (docs, examples, host-manager, manager, ROOT) and finally starting the HTTP/1.1 protocol handler on port 8080. The console window has standard Windows window controls (minimize, maximize, close) in the top right corner.

```
nds
12-Feb-2023 14:11:43.903 INFO [main] org.apache.catalina.core.StandardService.startInternal Starting service [Catalina]
12-Feb-2023 14:11:43.903 INFO [main] org.apache.catalina.core.StandardEngine.startInternal Starting Servlet engine: [Apache Tomcat/9.0.71]
12-Feb-2023 14:11:43.924 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application directory
[C:\apache-tomcat-9.0.71\webapps\docs]
12-Feb-2023 14:11:45.252 WARNING [main] org.apache.catalina.util.SessionIdGeneratorBase.createSecureRandom Creation of S
ecureRandom instance for session ID generation using [SHA1PRNG] took [945] milliseconds.
12-Feb-2023 14:11:45.291 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web applicatio
n directory [C:\apache-tomcat-9.0.71\webapps\docs] has finished in [1,368] ms
12-Feb-2023 14:11:45.292 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application di
rectory [C:\apache-tomcat-9.0.71\webapps\examples]
12-Feb-2023 14:11:45.930 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web applicatio
n directory [C:\apache-tomcat-9.0.71\webapps\examples] has finished in [638] ms
12-Feb-2023 14:11:45.931 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application di
rectory [C:\apache-tomcat-9.0.71\webapps\host-manager]
12-Feb-2023 14:11:45.990 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web applicatio
n directory [C:\apache-tomcat-9.0.71\webapps\host-manager] has finished in [60] ms
12-Feb-2023 14:11:45.991 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application di
rectory [C:\apache-tomcat-9.0.71\webapps\manager]
12-Feb-2023 14:11:46.046 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web applicatio
n directory [C:\apache-tomcat-9.0.71\webapps\manager] has finished in [54] ms
12-Feb-2023 14:11:46.047 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application di
rectory [C:\apache-tomcat-9.0.71\webapps\ROOT]
12-Feb-2023 14:11:46.101 INFO [main] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web applicatio
n directory [C:\apache-tomcat-9.0.71\webapps\ROOT] has finished in [53] ms
12-Feb-2023 14:11:46.107 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["http-nio-8080"]
12-Feb-2023 14:11:46.160 INFO [main] org.apache.catalina.startup.Catalina.start Server startup in [2306] milliseconds
```

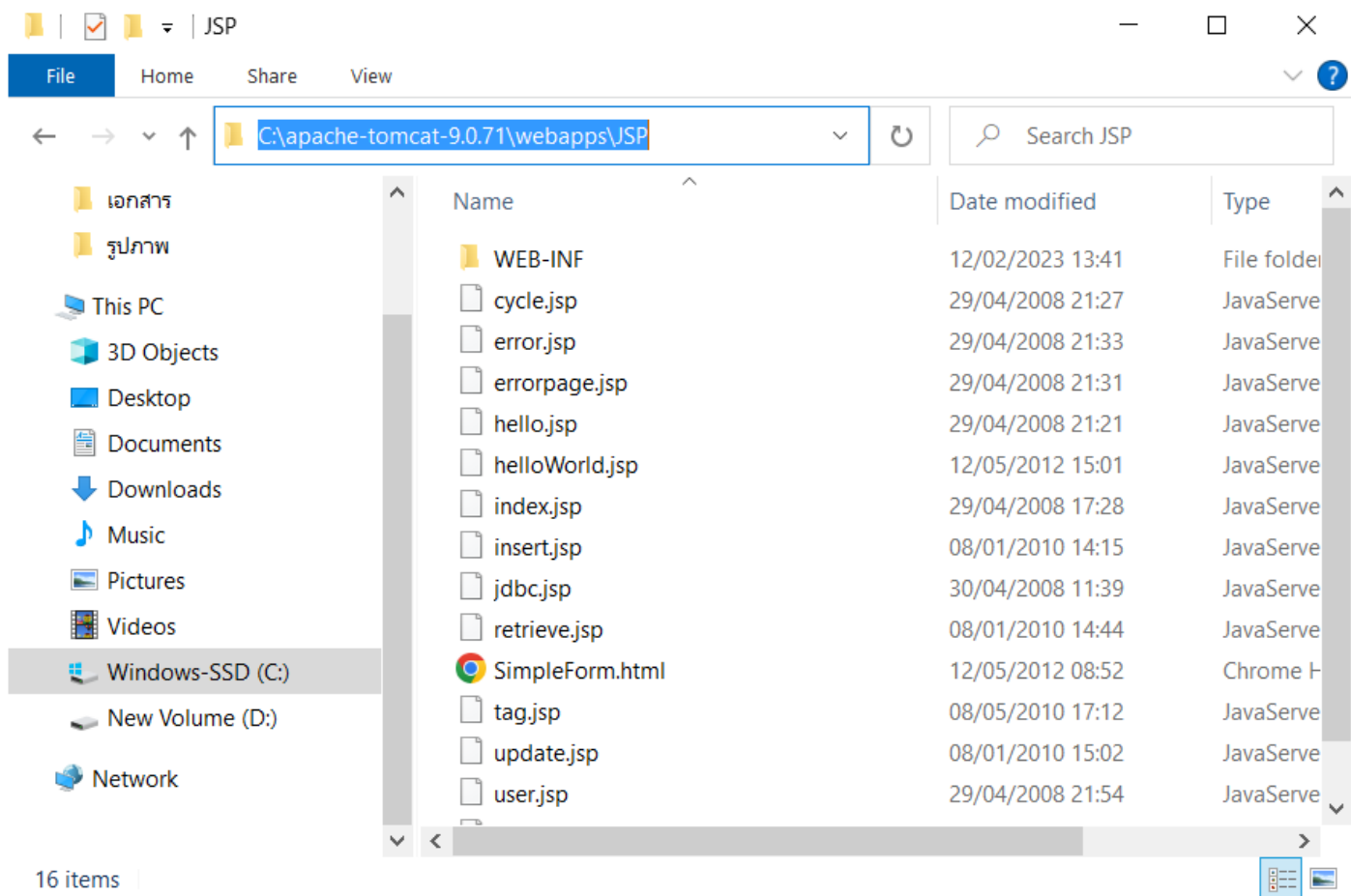
This may not work cause it required JAVA_HOME environment variables setting, then repeat step 2 with variable name JAVA_HOME=c:\jdk180



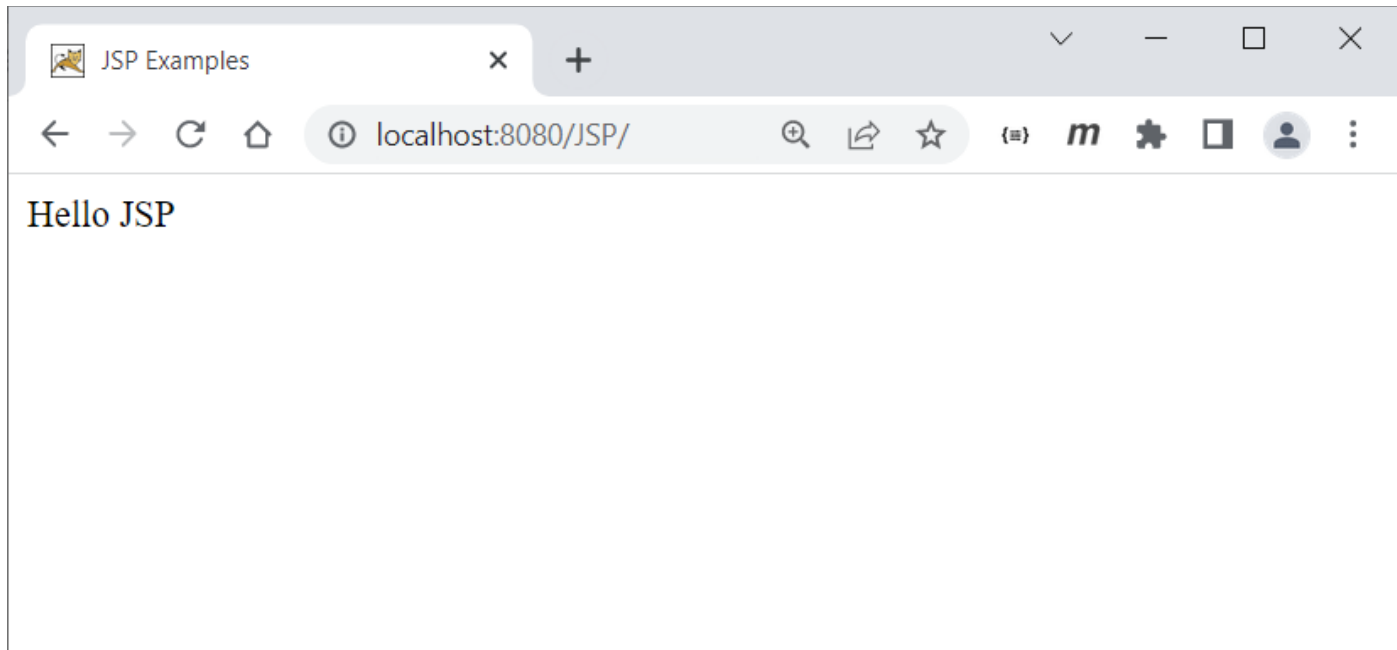
6. Try to examine tomcat is already work. Go to <http://localhost:8080/>



7. Extract material JSP.zip under tomcat webapps folder



8. Try to restart tomcat service by close startup.bat console application and launch again. Then go to <http://localhost:8080/JSP/>



9. For editor or IDE
 - a. Visual studio code , go to <https://code.visualstudio.com/download>
 - b. Notepad++, go to <https://notepad-plus-plus.org/downloads/>
 - c. Eclipse, go to <https://www.eclipse.org/downloads/>
10. For Database MySQL, go to <https://dev.mysql.com/downloads/installer/>
You may need mysql client administrator tool we recommend HeidiSQL
<https://www.heidisql.com/download.php>