```java
1    package com.cognizant.spring_learn;
2
3    import org.slf4j.Logger;
4    import org.slf4j.LoggerFactory;
5    import org.springframework.boot.SpringApplication;
6    import org.springframework.boot.autoconfigure.SpringBootApplication;
7
8    @SpringBootApplication
9    public class SpringLearnApplication {
10
11           private static final Logger LOGGER = LoggerFactory.getLogger(SpringLearnApplication.cla
12           public static void main(String[] args) {
13
14                  SpringApplication.run(SpringLearnApplication.class, args);
15
16                  LOGGER.info("START - SpringLearnApplication main()");
17                  LOGGER.info("END - SpringLearnApplication main()");
```

```java
1    package com.cognizant.spring_learn;
2
3    import org.junit.jupiter.api.Test;
4    import org.springframework.boot.test.context.SpringBootTest;
5
6    @SpringBootTest
7    class SpringLearnApplicationTests {
8
9            @Test
0            void contextLoads() {
1            }
```

```
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- jar:3.4.2:jar (default-jar) @ spring-learn ---
[INFO] Building jar: F:\Cognizant Digital Nurture\MySolutions\Cognizant Digital Nurture 4.0 Weekly Submissions\week 4\handson 1\spring-learn\target\spring-learn-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot:3.5.3:repackage (repackage) @ spring-learn ---
[INFO] Replacing main artifact F:\Cognizant Digital Nurture\MySolutions\Cognizant Digital Nurture 4.0 Weekly Submissions\week 4\handson 1\spring-learn\target\spring-learn-0.0.1-SNA
PSHOT.jar with repackaged archive, adding nested dependencies in BOOT-INF/.
[INFO] The original artifact has been renamed to F:\Cognizant Digital Nurture\MySolutions\Cognizant Digital Nurture 4.0 Weekly Submissions\week 4\handson 1\spring-learn\target\spri
ng-learn-0.0.1-SNAPSHOT.jar.original
[INFO]
[INFO] --- install:3.1.4:install (default-install) @ spring-learn ---
[INFO] Installing F:\Cognizant Digital Nurture\MySolutions\Cognizant Digital Nurture 4.0 Weekly Submissions\week 4\handson 1\spring-learn\pom.xml to C:\Users\win 10\.m2\repository\
com\cognizant\spring-learn\0.0.1-SNAPSHOT\spring-learn-0.0.1-SNAPSHOT.pom
[INFO] Installing F:\Cognizant Digital Nurture\MySolutions\Cognizant Digital Nurture 4.0 Weekly Submissions\week 4\handson 1\spring-learn\target\spring-learn-0.0.1-SNAPSHOT.jar to
C:\Users\win 10\.m2\repository\com\cognizant\spring-learn\0.0.1-SNAPSHOT\spring-learn-0.0.1-SNAPSHOT.jar
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  12.608 s
[INFO] Finished at: 2025-07-12T09:28:47+05:30
```

```
"C:\Users\win 10\.jdks\ms-21.0.7\bin\java.exe" ...

  .   ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/

 :: Spring Boot ::                (v3.5.3)

2025-07-12T09:30:35.083+05:30  INFO 8848 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : Starting SpringLearnApplication using Java 21.0.7 with PID 8848 (F:\Cognizant Digital Nurture\MySol
2025-07-12T09:30:35.091+05:30  INFO 8848 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : No active profile set, falling back to 1 default profile: 'default'
2025-07-12T09:30:35.206+05:30  INFO 8848 --- [spring-learn] [  restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : Devtools property defaults active! Set 'spring.devtools.add-properties' to 'false' to disable
2025-07-12T09:30:35.206+05:30  INFO 8848 --- [spring-learn] [  restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : For additional web related logging consider setting the 'logging.level.web' property to 'DEBUG'
2025-07-12T09:30:37.828+05:30  INFO 8848 --- [spring-learn] [  restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port 8080 (http)
2025-07-12T09:30:37.054+05:30  INFO 8848 --- [spring-learn] [  restartedMain] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
2025-07-12T09:30:37.054+05:30  INFO 8848 --- [spring-learn] [  restartedMain] o.apache.catalina.core.StandardEngine    : Starting Servlet engine: [Apache Tomcat/10.1.42]
2025-07-12T09:30:37.131+05:30  INFO 8848 --- [spring-learn] [  restartedMain] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebApplicationContext
2025-07-12T09:30:37.133+05:30  INFO 8848 --- [spring-learn] [  restartedMain] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1923 ms
2025-07-12T09:30:37.771+05:30  INFO 8848 --- [spring-learn] [  restartedMain] o.s.b.d.a.OptionalLiveReloadServer       : LiveReload server is running on port 35729
2025-07-12T09:30:37.821+05:30  INFO 8848 --- [spring-learn] [  restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port 8080 (http) with context path '/'
2025-07-12T09:30:37.838+05:30  INFO 8848 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : Started SpringLearnApplication in 3.592 seconds (process running for 4.361)
2025-07-12T09:30:37.844+05:30  INFO 8848 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : START - SpringLearnApplication main()
2025-07-12T09:30:37.844+05:30  INFO 8848 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : END - SpringLearnApplication main()
```

```
1      package com.cognizant.spring_learn;

2

3      import org.junit.jupiter.api.Test;

4      import org.springframework.boot.test.context.SpringBootTest;

5

6      @SpringBootTest

7 ∨    class SpringLearnApplicationTests {

8

9              @Test

10             void contextLoads() {

11             }

12

13     }

32     set -euf

33     [ "${MVNW_VERBOSE-}" != debug ] || set -x

34

35     # OS specific support.

36     native_path() { printf %s\\n "$1"; }

37     case "$(uname)" in

38     CYGWIN* | MINGW*)

39       [ -z "${JAVA_HOME-}" ] || JAVA_HOME="$(cygpath --unix "$JAVA_HOME")"

40       native_path() { cygpath --path --windows "$1"; }

41       ;;

42     esac

43

44     # set JAVACMD and JAVACCMD

45 ∨   set_java_home() {

46       # For Cygwin and MinGW, ensure paths are in Unix format before anything is touched

47       if [ -n "${JAVA_HOME-}" ]; then

48         if [ -x "$JAVA_HOME/jre/sh/java" ]; then

49           # IBM's JDK on AIX uses strange locations for the executables

50           JAVACMD="$JAVA_HOME/jre/sh/java"

51           JAVACCMD="$JAVA HOME/jre/sh/javac"

51           JAVACCMD="$JAVA_HOME/jre/sh/javac"

52         else

53           JAVACMD="$JAVA_HOME/bin/java"

54           JAVACCMD="$JAVA_HOME/bin/javac"

55

56         if [ ! -x "$JAVACMD" ] || [ ! -x "$JAVACCMD" ]; then

57           echo "The JAVA_HOME environment variable is not defined correctly, so mvnw cannot run."

58           echo "JAVA_HOME is set to \"$JAVA_HOME\", but \"\$JAVA_HOME/bin/java\" or \"\$JAVA_HOME

59           return 1

60         fi

61       fi

62     else

63       JAVACMD="$(

64         'set' +e

65         'unset' -f command 2>/dev/null

66         'command' -v java

67       )" || :

68       JAVACCMD="$(

69         'set' +e
```

```
68          JAVACCMD="$(
69            'set' +e
70            'unset' -f command 2>/dev/null
71            'command' -v javac
72          )" || :
73
74          if [ ! -x "${JAVACMD-}" ] || [ ! -x "${JAVACCMD-}" ]; then
75            echo "The java/javac command does not exist in PATH nor is JAVA_HOME set, so mvnw cannot
76            return 1
77          fi
78        fi
79      }
80
81      # hash string like Java String::hashCode
82 ∨    hash_string() {
83        str="${1:-}" h=0
84        while [ -n "$str" ]; do
85          char="${str%"${str#?}"}"
86          h=$(((h * 31 + $(LC_CTYPE=C printf %d "'$char")) % 4294967296))
87          str="${str#?}"
88        done
89        printf %x\\n $h
90      }
91
92      verbose() { :; }
93      [ "${MVNW_VERBOSE-}" != true ] || verbose() { printf %s\\n "${1-}"; }
94
95      die() {
96        printf %s\\n "$1" >&2
97        exit 1
98      }
100 ∨   trim() {
101       # MWRAPPER-139:
102       #   Trims trailing and leading whitespace, carriage returns, tabs, and linefeeds.
103       #   Needed for removing poorly interpreted newline sequences when running in more
104       #   exotic environments such as mingw bash on Windows.
105       printf "%s" "${1}" | tr -d '[:space:]'
106     }
107
108     # parse distributionUrl and optional distributionSha256Sum, requires .mvn/wrapper/maven-wrapper
109     while IFS="=" read -r key value; do
110       case "${key-}" in
111       distributionUrl) distributionUrl=$(trim "${value-}") ;;
112       distributionSha256Sum) distributionSha256Sum=$(trim "${value-}") ;;
113       esac
114     done <"${0%/*}/.mvn/wrapper/maven-wrapper.properties"
115     [ -n "${distributionUrl-}" ] || die "cannot read distributionUrl property in ${0%/*}/.mvn/wrapp
116
117     case "${distributionUrl##*/}" in
118     maven-mvnd-*bin.*)
```

```
119        MVN_CMD=mvnd.sh _MVNW_REPO_PATTERN=/maven/mvnd/
120        case "${PROCESSOR_ARCHITECTURE-}${PROCESSOR_ARCHITEW6432-}:$(uname -a)" in
121        *AMD64:CYGWIN* | *AMD64:MINGW*) distributionPlatform=windows-amd64 ;;
122        :Darwin*x86_64) distributionPlatform=darwin-amd64 ;;
123        :Darwin*arm64) distributionPlatform=darwin-aarch64 ;;
124        :Linux*x86_64*) distributionPlatform=linux-amd64 ;;
125        *)
126          echo "Cannot detect native platform for mvnd on $(uname)-$(uname -m), use pure java version" >&
127          distributionPlatform=linux-amd64
128          ;;
129        esac
130        distributionUrl="${distributionUrl%-bin.*}-$distributionPlatform.zip"
131        ;;
132      maven-mvnd-*) MVN_CMD=mvnd.sh _MVNW_REPO_PATTERN=/maven/mvnd/ ;;
133      *) MVN_CMD="mvn${0##*/mvnw}" _MVNW_REPO_PATTERN=/org/apache/maven/ ;;
134      esac
135
136      # apply MVNW_REPOURL and calculate MAVEN_HOME
137      # maven home pattern: ~/.m2/wrapper/dists/{apache-maven-<version>,maven-mvnd-<version>-<platform>}/
138      [ -z "${MVNW_REPOURL-}" ] || distributionUrl="$MVNW_REPOURL$_MVNW_REPO_PATTERN${distributionUrl#*"$
139      distributionUrlName="${distributionUrl##*/}"
140      distributionUrlNameMain="${distributionUrlName%.*}"
141      distributionUrlNameMain="${distributionUrlNameMain%-bin}"
142      MAVEN_USER_HOME="${MAVEN_USER_HOME:-${HOME}/.m2}"
143      MAVEN_HOME="${MAVEN_USER_HOME}/wrapper/dists/${distributionUrlNameMain-}/$(hash_string "$distributi
144
145      exec_maven() {
146        unset MVNW_VERBOSE MVNW_USERNAME MVNW_PASSWORD MVNW_REPOURL || :
147        exec "$MAVEN_HOME/bin/$MVN_CMD" "$@" || die "cannot exec $MAVEN_HOME/bin/$MVN_CMD"
148      }
149
150      if [ -d "$MAVEN_HOME" ]; then
151        verbose "found existing MAVEN_HOME at $MAVEN_HOME"
152        exec_maven "$@"
153      fi
154
155      case "${distributionUrl-}" in
156      *?-bin.zip | *?maven-mvnd-?*-?*.zip) ;;
157      *) die "distributionUrl is not valid, must match *-bin.zip or maven-mvnd-*.zip, but found '${distri
158      esac
159
160      # prepare tmp dir
161      if TMP_DOWNLOAD_DIR="$(mktemp -d)" && [ -d "$TMP_DOWNLOAD_DIR" ]; then
162        clean() { rm -rf -- "$TMP_DOWNLOAD_DIR"; }
163        trap clean HUP INT TERM EXIT
164      else
165        die "cannot create temp dir"
166      fi
167
168      mkdir -p -- "${MAVEN_HOME%/*}"
169
170      # Download and Install Apache Maven
171      verbose "Couldn't find MAVEN_HOME, downloading and installing it ..."
172      verbose "Downloading from: $distributionUrl"
173      verbose "Downloading to: $TMP_DOWNLOAD_DIR/$distributionUrlName"
174
175      # select .zip or .tar.gz
176      if ! command -v unzip >/dev/null; then
```

```bash
177        distributionUrl="${distributionUrl%.zip}.tar.gz"
178        distributionUrlName="${distributionUrl##*/}"
179      fi
180
181      # verbose opt
182      __MVNW_QUIET_WGET=--quiet __MVNW_QUIET_CURL=--silent __MVNW_QUIET_UNZIP=-q __MVNW_QUIET_TAR=''
183      [ "${MVNW_VERBOSE-}" != true ] || __MVNW_QUIET_WGET='' __MVNW_QUIET_CURL='' __MVNW_QUIET_UNZIP=''
184
185      # normalize http auth
186      case "${MVNW_PASSWORD:+has-password}" in
187      '') MVNW_USERNAME='' MVNW_PASSWORD='' ;;
188      has-password) [ -n "${MVNW_USERNAME-}" ] || MVNW_USERNAME='' MVNW_PASSWORD='' ;;
189      esac
190
191      if [ -z "${MVNW_USERNAME-}" ] && command -v wget >/dev/null; then
192        verbose "Found wget ... using wget"
193        wget ${__MVNW_QUIET_WGET:+"$__MVNW_QUIET_WGET"} "$distributionUrl" -O "$TMP_DOWNLOAD_DIR/$distrib
194      elif [ -z "${MVNW_USERNAME-}" ] && command -v curl >/dev/null; then
195        verbose "Found curl ... using curl"
196        curl ${__MVNW_QUIET_CURL:+"$__MVNW_QUIET_CURL"} -f -L -o "$TMP_DOWNLOAD_DIR/$distributionUrlName"
197      elif set_java_home; then
198        verbose "Falling back to use Java to download"
199        javaSource="$TMP_DOWNLOAD_DIR/Downloader.java"
200        targetZip="$TMP_DOWNLOAD_DIR/$distributionUrlName"
201        cat >"$javaSource" <<-END
202              public class Downloader extends java.net.Authenticator
203              {
204                protected java.net.PasswordAuthentication getPasswordAuthentication()
205                {
206                  return new java.net.PasswordAuthentication( System.getenv( "MVNW_USERNAME" ), System.get
207                }
208                public static void main( String[] args ) throws Exception
209                {
210                  setDefault( new Downloader() );
211                  java.nio.file.Files.copy( java.net.URI.create( args[0] ).toURL().openStream(), java.nio.
212                }
213              }
214          END
215        # For Cygwin/MinGW, switch paths to Windows format before running javac and java
216        verbose " - Compiling Downloader.java ..."
217        "$(native_path "$JAVACCMD")" "$(native_path "$javaSource")" || die "Failed to compile Downloader.j
218        verbose " - Running Downloader.java ..."
219        "$(native_path "$JAVACMD")" -cp "$(native_path "$TMP_DOWNLOAD_DIR")" Downloader "$distributionUrl"
220      fi
221
222      # If specified, validate the SHA-256 sum of the Maven distribution zip file
223      if [ -n "${distributionSha256Sum-}" ]; then
224        distributionSha256Result=false
225        if [ "$MVN_CMD" = mvnd.sh ]; then
226          echo "Checksum validation is not supported for maven-mvnd." >&2
227          echo "Please disable validation by removing 'distributionSha256Sum' from your maven-wrapper.prop
228          exit 1
229        elif command -v sha256sum >/dev/null; then
230          if echo "$distributionSha256Sum  $TMP_DOWNLOAD_DIR/$distributionUrlName" | sha256sum -c >/dev/nu
231            distributionSha256Result=true
232          fi
233        elif command -v shasum >/dev/null; then
234          if echo "$distributionSha256Sum  $TMP_DOWNLOAD_DIR/$distributionUrlName" | shasum -a 256 -c >/de
```

```xml
1    <?xml version="1.0" encoding="UTF-8"?>
2    <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-insta
3        xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0
4        <modelVersion>4.0.0</modelVersion>
5        <parent>
6            <groupId>org.springframework.boot</groupId>
7            <artifactId>spring-boot-starter-parent</artifactId>
8            <version>3.5.3</version>
9            <relativePath/> <!-- lookup parent from repository -->
10        </parent>
11        <groupId>com.cognizant</groupId>
12        <artifactId>spring-learn</artifactId>
13        <version>0.0.1-SNAPSHOT</version>
14        <name>spring-learn</name>
15        <description>Demo project for Spring Boot</description>
16        <url/>
17        <licenses>
18            <license/>
19        </licenses>
20        <developers>
21            <developer/>
22        </developers>
23        <scm>
24            <connection/>
25            <developerConnection/>
26            <tag/>
27            <url/>
28        </scm>
29        <properties>
30            <java.version>21</java.version>
31        </properties>
32        <dependencies>
33            <dependency>
34                <groupId>org.springframework.boot</groupId>
35                <artifactId>spring-boot-starter-web</artifactId>
36            </dependency>
37
38            <dependency>
39                <groupId>org.springframework.boot</groupId>
40                <artifactId>spring-boot-devtools</artifactId>
41                <scope>runtime</scope>
42                <optional>true</optional>
```

```
___|  .__|_| |_|_| |_\__, | / / / /
===|_|==============|___/=/_/_/_/

ing Boot ::              (v3.5.3)

-12T19:52:20.776+05:30  INFO 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : Starting SpringLearnApplication using Java 21.0.7 with PI
-12T19:52:20.786+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : Running with Spring Boot v3.5.3, Spring v6.2.8
-12T19:52:20.788+05:30  INFO 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : No active profile set, falling back to 1 default profile:
-12T19:52:20.892+05:30  INFO 16316 --- [spring-learn] [  restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : Devtools property defaults active! Set 'spring.devtools.
-12T19:52:20.893+05:30  INFO 16316 --- [spring-learn] [  restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : For additional web related logging consider setting the '
-12T19:52:22.948+05:30  INFO 16316 --- [spring-learn] [  restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port 8080 (http)
-12T19:52:22.976+05:30  INFO 16316 --- [spring-learn] [  restartedMain] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
-12T19:52:22.977+05:30  INFO 16316 --- [spring-learn] [  restartedMain] o.apache.catalina.core.StandardEngine    : Starting Servlet engine: [Apache Tomcat/10.1.42]
-12T19:52:23.054+05:30  INFO 16316 --- [spring-learn] [  restartedMain] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebApplicationContext
-12T19:52:23.056+05:30  INFO 16316 --- [spring-learn] [  restartedMain] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 2
-12T19:52:23.753+05:30  INFO 16316 --- [spring-learn] [  restartedMain] o.s.b.d.a.OptionalLiveReloadServer       : LiveReload server is running on port 35729
-12T19:52:23.811+05:30  INFO 16316 --- [spring-learn] [  restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat started on port 8080 (http) with context path '/'
-12T19:52:23.826+05:30  INFO 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : Started SpringLearnApplication in 3.875 seconds (process
-12T19:52:23.832+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : Starting displayCountry method...
-12T19:52:24.044+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.cognizant.spring_learn.models.Country  : Inside Country Constructor.
-12T19:52:24.047+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.cognizant.spring_learn.models.Country  : Inside Country setCode() method. Setting code to: IN
-12T19:52:24.049+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.cognizant.spring_learn.models.Country  : Inside Country setName() method. Setting name to: India
-12T19:52:24.051+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.cognizant.spring_learn.models.Country  : Inside Country toString() method.
-12T19:52:24.052+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : Country : Country [code=IN, name=India]
-12T19:52:24.052+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : displayCountry method finished.
-12T19:52:24.053+05:30 DEBUG 16316 --- [spring-learn] [  restartedMain] c.c.spring_learn.SpringLearnApplication  : SpringLearnApplication main method finished.
```