CI/CD Deployment for Springboot Application

Src/main/java/com/SpringTest/SpringApplication.java:

```
package com.SpringTest;

import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication
public class SpringJenkinsApplication {

	public static  Logger log =
LoggerFactory.getLogger(SpringJenkinsApplication.class);

	public void init() {
		log.info("Spring Boot Application Started.....");

	}

	public static void main(String[] args) {

			log.info("Application Executed .....");
		SpringApplication.run(SpringJenkinsApplication.class, args);

	}
}
```

Src/test/java/com/SpringTest/SpringAplicationTest.java:

```
package com.SpringTest;



import org.junit.jupiter.api.Test;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.boot.test.context.SpringBootTest;

@SpringBootTest
```

```
class SpringJenkinsApplicationTests {

	public static  Logger log =
LoggerFactory.getLogger(SpringJenkinsApplication.class);

	@Test
	void contextLoads() {

		log.info("Spring Test Case Executing.....");
	}

}
```

META-INF/maven/com.SpringTest/Testing-Spring-Jenkins/pom.properties:

```
#Generated by Maven Integration for Eclipse
#Tue May 10 13:03:45 IST 2022
m2e.projectLocation=C\:\\Users\\hp\\Desktop\\phase 5 \\CI-CD-Deployment-for-Springboot-Application
m2e.projectName=Spring-Jenkins
groupId=com.SpringTest
artifactId=Testing-Spring-Jenkins
version=0.0.1-SNAPSHOT
```

META-INF/maven/com.SpringTest/Testing-Spring-Jenkins/pom.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
	xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
	<modelVersion>4.0.0</modelVersion>
	<parent>
		<groupId>org.springframework.boot</groupId>
		<artifactId>spring-boot-starter-parent</artifactId>
		<version>2.5.4</version>
		<relativePath/> <!-- lookup parent from repository -->
	</parent>
	<groupId>com.SpringTest</groupId>
	<artifactId>Testing-Spring-Jenkins</artifactId>
	<version>0.0.1-SNAPSHOT</version>
	<name>Spring-Jenkins</name>
	<description> Spring Boot -Jenkins</description>
	<properties>
		<java.version>11</java.version>
	</properties>
```

```
	<dependencies>
		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-starter-thymeleaf</artifactId>
		</dependency>
		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-starter-web</artifactId>
		</dependency>

		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-devtools</artifactId>
			<scope>runtime</scope>
			<optional>true</optional>
		</dependency>
		<dependency>
			<groupId>mysql</groupId>
			<artifactId>mysql-connector-java</artifactId>
			<scope>runtime</scope>
		</dependency>
		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-starter-test</artifactId>
			<scope>test</scope>
		</dependency>
	</dependencies>

	<build>
		<plugins>
			<plugin>
				<groupId>org.springframework.boot</groupId>
				<artifactId>spring-boot-maven-plugin</artifactId>
			</plugin>
		</plugins>
	</build>

</project>
```

MANIFEST.MF:

Manifest-Version: 1.0
Build-Jdk-Spec: 13
Implementation-Title: Spring-Jenkins
Implementation-Version: 0.0.1-SNAPSHOT
Created-By: Maven Integration for Eclipse

Maven-archiver/pom.properties:

artifactId=Testing-Spring-Jenkins

groupId=com.SpringTest
version=0.0.1-SNAPSHOT

mvnw:

```
#!/bin/sh
# ----------------------------------------------------------------------------
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# or more contributor license agreements.  See the NOTICE file
# distributed with this work for additional information
# regarding copyright ownership.  The ASF licenses this file
# to you under the Apache License, Version 2.0 (the
# "License"); you may not use this file except in compliance
# with the License.  You may obtain a copy of the License at
#
#    https://www.apache.org/licenses/LICENSE-2.0
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# software distributed under the License is distributed on an
# "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY
# KIND, either express or implied.  See the License for the
# specific language governing permissions and limitations
# under the License.
# ----------------------------------------------------------------------------

# ----------------------------------------------------------------------------
# Maven Start Up Batch script
#
# Required ENV vars:
# ------------------
#   JAVA_HOME - location of a JDK home dir
#
# Optional ENV vars
# -----------------
#   M2_HOME - location of maven2's installed home dir
#   MAVEN_OPTS - parameters passed to the Java VM when running Maven
#     e.g. to debug Maven itself, use
#       set MAVEN_OPTS=-Xdebug -
Xrunjdwp:transport=dt_socket,server=y,suspend=y,address=8000
#   MAVEN_SKIP_RC - flag to disable loading of mavenrc files
# ----------------------------------------------------------------------------

if [ -z "$MAVEN_SKIP_RC" ] ; then

  if [ -f /etc/mavenrc ] ; then
    . /etc/mavenrc
  fi

  if [ -f "$HOME/.mavenrc" ] ; then
    . "$HOME/.mavenrc"
```

```
  fi

fi

# OS specific support.  $var _must_ be set to either true or false.
cygwin=false;
darwin=false;
mingw=false
case "`uname`" in
  CYGWIN*) cygwin=true ;;
  MINGW*) mingw=true;;
  Darwin*) darwin=true
    # Use /usr/libexec/java_home if available, otherwise fall back to /Library/Java/Home
    # See https://developer.apple.com/library/mac/qa/qa1170/_index.html
    if [ -z "$JAVA_HOME" ]; then
      if [ -x "/usr/libexec/java_home" ]; then
        export JAVA_HOME="`/usr/libexec/java_home`"
      else
        export JAVA_HOME="/Library/Java/Home"
      fi
    fi
    ;;
esac

if [ -z "$JAVA_HOME" ] ; then
  if [ -r /etc/gentoo-release ] ; then
    JAVA_HOME=`java-config --jre-home`
  fi
fi

if [ -z "$M2_HOME" ] ; then
  ## resolve links - $0 may be a link to maven's home
  PRG="$0"

  # need this for relative symlinks
  while [ -h "$PRG" ] ; do
    ls=`ls -ld "$PRG"`
    link=`expr "$ls" : '.*-> \(.*\)$'`
    if expr "$link" : '/.*' > /dev/null; then
      PRG="$link"
    else
      PRG="`dirname "$PRG"`/$link"
    fi
  done

  saveddir=`pwd`

  M2_HOME=`dirname "$PRG"`/..

  # make it fully qualified
```

```
  M2_HOME=`cd "$M2_HOME" && pwd`

  cd "$saveddir"
  # echo Using m2 at $M2_HOME
fi

# For Cygwin, ensure paths are in UNIX format before anything is touched
if $cygwin ; then
  [ -n "$M2_HOME" ] &&
    M2_HOME=`cygpath --unix "$M2_HOME"`
  [ -n "$JAVA_HOME" ] &&
    JAVA_HOME=`cygpath --unix "$JAVA_HOME"`
  [ -n "$CLASSPATH" ] &&
    CLASSPATH=`cygpath --path --unix "$CLASSPATH"`
fi

# For Mingw, ensure paths are in UNIX format before anything is touched
if $mingw ; then
  [ -n "$M2_HOME" ] &&
    M2_HOME="`(cd "$M2_HOME"; pwd)`"
  [ -n "$JAVA_HOME" ] &&
    JAVA_HOME="`(cd "$JAVA_HOME"; pwd)`"
fi

if [ -z "$JAVA_HOME" ]; then
  javaExecutable="`which javac`"
  if [ -n "$javaExecutable" ] && ! [ "`expr \"$javaExecutable\" : '\([^ ]*\)'`" = "no" ]; then
    # readlink(1) is not available as standard on Solaris 10.
    readLink=`which readlink`
    if [ ! `expr "$readLink" : '\([^ ]*\)'` = "no" ]; then
      if $darwin ; then
        javaHome="`dirname \"$javaExecutable\"`"
        javaExecutable="`cd \"$javaHome\" && pwd -P`/javac"
      else
        javaExecutable="`readlink -f \"$javaExecutable\"`"
      fi
      javaHome="`dirname \"$javaExecutable\"`"
      javaHome=`expr "$javaHome" : '\(.*\)/bin'`
      JAVA_HOME="$javaHome"
      export JAVA_HOME
    fi
  fi
fi

if [ -z "$JAVACMD" ] ; then
  if [ -n "$JAVA_HOME"  ] ; then
    if [ -x "$JAVA_HOME/jre/sh/java" ] ; then
      # IBM's JDK on AIX uses strange locations for the executables
      JAVACMD="$JAVA_HOME/jre/sh/java"
    else
```

```
    JAVACMD="$JAVA_HOME/bin/java"
   fi
  else
   JAVACMD="`which java`"
  fi
fi

if [ ! -x "$JAVACMD" ] ; then
  echo "Error: JAVA_HOME is not defined correctly." >&2
  echo "  We cannot execute $JAVACMD" >&2
  exit 1
fi

if [ -z "$JAVA_HOME" ] ; then
  echo "Warning: JAVA_HOME environment variable is not set."
fi

CLASSWORLDS_LAUNCHER=org.codehaus.plexus.classworlds.launcher.Launcher

# traverses directory structure from process work directory to filesystem root
# first directory with .mvn subdirectory is considered project base directory
find_maven_basedir() {

  if [ -z "$1" ]
  then
    echo "Path not specified to find_maven_basedir"
    return 1
  fi

  basedir="$1"
  wdir="$1"
  while [ "$wdir" != '/' ] ; do
    if [ -d "$wdir"/.mvn ] ; then
      basedir=$wdir
      break
    fi
    # workaround for JBEAP-8937 (on Solaris 10/Sparc)
    if [ -d "${wdir}" ]; then
      wdir=`cd "$wdir/.."; pwd`
    fi
    # end of workaround
  done
  echo "${basedir}"
}

# concatenates all lines of a file
concat_lines() {
  if [ -f "$1" ]; then
    echo "$(tr -s '\n' ' ' < "$1")"
  fi
```

```
}

BASE_DIR=`find_maven_basedir "$(pwd)"`
if [ -z "$BASE_DIR" ]; then
  exit 1;
fi

##########################################################################################
# Extension to allow automatically downloading the maven-wrapper.jar from Maven-central
# This allows using the maven wrapper in projects that prohibit checking in binary data.
##########################################################################################
if [ -r "$BASE_DIR/.mvn/wrapper/maven-wrapper.jar" ]; then
    if [ "$MVNW_VERBOSE" = true ]; then
      echo "Found .mvn/wrapper/maven-wrapper.jar"
    fi
else
    if [ "$MVNW_VERBOSE" = true ]; then
      echo "Couldn't find .mvn/wrapper/maven-wrapper.jar, downloading it ..."
    fi
    if [ -n "$MVNW_REPOURL" ]; then
      jarUrl="$MVNW_REPOURL/io/takari/maven-wrapper/0.5.6/maven-wrapper-0.5.6.jar"
    else
      jarUrl="https://repo.maven.apache.org/maven2/io/takari/maven-wrapper/0.5.6/maven-wrapper-0.5.6.jar"
    fi
    while IFS="=" read key value; do
      case "$key" in (wrapperUrl) jarUrl="$value"; break ;;
      esac
    done < "$BASE_DIR/.mvn/wrapper/maven-wrapper.properties"
    if [ "$MVNW_VERBOSE" = true ]; then
      echo "Downloading from: $jarUrl"
    fi
    wrapperJarPath="$BASE_DIR/.mvn/wrapper/maven-wrapper.jar"
    if $cygwin; then
      wrapperJarPath=`cygpath --path --windows "$wrapperJarPath"`
    fi

    if command -v wget > /dev/null; then
        if [ "$MVNW_VERBOSE" = true ]; then
          echo "Found wget ... using wget"
        fi
        if [ -z "$MVNW_USERNAME" ] || [ -z "$MVNW_PASSWORD" ]; then
            wget "$jarUrl" -O "$wrapperJarPath"
        else
            wget --http-user=$MVNW_USERNAME --http-password=$MVNW_PASSWORD "$jarUrl" -O "$wrapperJarPath"
        fi
    elif command -v curl > /dev/null; then
```

```
      if [ "$MVNW_VERBOSE" = true ]; then
        echo "Found curl ... using curl"
      fi
      if [ -z "$MVNW_USERNAME" ] || [ -z "$MVNW_PASSWORD" ]; then
          curl -o "$wrapperJarPath" "$jarUrl" -f
      else
          curl --user $MVNW_USERNAME:$MVNW_PASSWORD -o "$wrapperJarPath"
"$jarUrl" -f
      fi

    else
      if [ "$MVNW_VERBOSE" = true ]; then
        echo "Falling back to using Java to download"
      fi
      javaClass="$BASE_DIR/.mvn/wrapper/MavenWrapperDownloader.java"
      # For Cygwin, switch paths to Windows format before running javac
      if $cygwin; then
        javaClass=`cygpath --path --windows "$javaClass"`
      fi
      if [ -e "$javaClass" ]; then
          if [ ! -e "$BASE_DIR/.mvn/wrapper/MavenWrapperDownloader.class" ]; then
              if [ "$MVNW_VERBOSE" = true ]; then
                echo " - Compiling MavenWrapperDownloader.java ..."
              fi
              # Compiling the Java class
              ("$JAVA_HOME/bin/javac" "$javaClass")
          fi
          if [ -e "$BASE_DIR/.mvn/wrapper/MavenWrapperDownloader.class" ]; then
              # Running the downloader
              if [ "$MVNW_VERBOSE" = true ]; then
                echo " - Running MavenWrapperDownloader.java ..."
              fi
              ("$JAVA_HOME/bin/java" -cp .mvn/wrapper MavenWrapperDownloader
"$MAVEN_PROJECTBASEDIR")
          fi
      fi
    fi
fi
##########################################################################
###############
# End of extension
##########################################################################
###############

export MAVEN_PROJECTBASEDIR=${MAVEN_BASEDIR:-"$BASE_DIR"}
if [ "$MVNW_VERBOSE" = true ]; then
  echo $MAVEN_PROJECTBASEDIR
fi
MAVEN_OPTS="$(concat_lines "$MAVEN_PROJECTBASEDIR/.mvn/jvm.config")
$MAVEN_OPTS"
```

```
# For Cygwin, switch paths to Windows format before running java
if $cygwin; then
  [ -n "$M2_HOME" ] &&
    M2_HOME=`cygpath --path --windows "$M2_HOME"`
  [ -n "$JAVA_HOME" ] &&
    JAVA_HOME=`cygpath --path --windows "$JAVA_HOME"`
  [ -n "$CLASSPATH" ] &&
    CLASSPATH=`cygpath --path --windows "$CLASSPATH"`
  [ -n "$MAVEN_PROJECTBASEDIR" ] &&
    MAVEN_PROJECTBASEDIR=`cygpath --path --windows
"$MAVEN_PROJECTBASEDIR"`
fi

# Provide a "standardized" way to retrieve the CLI args that will
# work with both Windows and non-Windows executions.
MAVEN_CMD_LINE_ARGS="$MAVEN_CONFIG $@"
export MAVEN_CMD_LINE_ARGS

WRAPPER_LAUNCHER=org.apache.maven.wrapper.MavenWrapperMain

exec "$JAVACMD" \
  $MAVEN_OPTS \
  -classpath "$MAVEN_PROJECTBASEDIR/.mvn/wrapper/maven-wrapper.jar" \
  "-Dmaven.home=${M2_HOME}" "-
Dmaven.multiModuleProjectDirectory=${MAVEN_PROJECTBASEDIR}" \
  ${WRAPPER_LAUNCHER} $MAVEN_CONFIG "$@"
```

Pom.xml:

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
        <modelVersion>4.0.0</modelVersion>
        <parent>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-starter-parent</artifactId>
                <version>2.5.4</version>
                <relativePath/> <!-- lookup parent from repository -->
        </parent>
        <groupId>com.SpringTest</groupId>
        <artifactId>Testing-Spring-Jenkins</artifactId>
        <version>0.0.1-SNAPSHOT</version>
        <name>Spring-Jenkins</name>
        <description> Spring Boot -Jenkins</description>
        <properties>
                <java.version>11</java.version>
        </properties>
```

```
	<dependencies>
		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-starter-thymeleaf</artifactId>
		</dependency>
		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-starter-web</artifactId>
		</dependency>

		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-devtools</artifactId>
			<scope>runtime</scope>
			<optional>true</optional>
		</dependency>
		<dependency>
			<groupId>mysql</groupId>
			<artifactId>mysql-connector-java</artifactId>
			<scope>runtime</scope>
		</dependency>
		<dependency>
			<groupId>org.springframework.boot</groupId>
			<artifactId>spring-boot-starter-test</artifactId>
			<scope>test</scope>
		</dependency>
	</dependencies>

	<build>
		<plugins>
			<plugin>
				<groupId>org.springframework.boot</groupId>
				<artifactId>spring-boot-maven-plugin</artifactId>
			</plugin>
		</plugins>
	</build>

</project>
```