6. Create a Maven Project and implement all the programs in Maven Project and add Apache POI dependency in pom.xml and run all the programs using Maven Commands

Installed Maven:

```
Microsoft Windows [Version 10.0.22621.2283]                                                        Clo
(c) Microsoft Corporation. All rights reserved.

C:\Users\Vajintha C>java -version
java version "20.0.2" 2023-07-18
Java(TM) SE Runtime Environment (build 20.0.2+9-78)
Java HotSpot(TM) 64-Bit Server VM (build 20.0.2+9-78, mixed mode, sharing)

C:\Users\Vajintha C>mvn -version
Apache Maven 3.9.4 (dfbb324ad4a7c8fb0bf182e6d91b0ae20e3d2dd9)
Maven home: C:\Program Files\apache-maven-3.9.4
Java version: 20.0.2, vendor: Oracle Corporation, runtime: C:\Program Files\Java\jdk-20
Default locale: en_US, platform encoding: UTF-8
OS name: "windows 11", version: "10.0", arch: "amd64", family: "windows"
```

Navigated to corresponding folder:

```
C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran>cd "Que 06  Maven"
```

Used below command to create a maven project:

mvn archetype:generate -DgroupId=Question6 -DartifactId=que06 -DarchetypeArtifactId=maven-archetype-quickstart -DinteractiveMode=false

```
C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven>mvn archetype:generate -DgroupId=Question6
-DartifactId=que06 -DarchetypeArtifactId=maven-archetype-quickstart -DinteractiveMode=false
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.2.0/maven-clean-plugin-3.2.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.2.0/maven-clean-plugin-3.2.0.pom (5.3 kB at 3.2
kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/35/maven-plugins-35.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/35/maven-plugins-35.pom (9.9 kB at 29 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/35/maven-parent-35.pom
```
.
.
.

```
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/3/apache-3.pom (3.4 kB at 16 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.0/maven-archetype-quickstart-1.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.0/maven-archetype-quickstart-1.0.jar
(4.3 kB at 11 kB/s)
[INFO] ----------------------------------------------------------------------
[INFO] Using following parameters for creating project from Old (1.x) Archetype: maven-archetype-quickstart:1.0
[INFO] ----------------------------------------------------------------------
[INFO] Parameter: basedir, Value: C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven
[INFO] Parameter: package, Value: Question6
[INFO] Parameter: groupId, Value: Question6
[INFO] Parameter: artifactId, Value: que06
[INFO] Parameter: packageName, Value: Question6
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] project created from Old (1.x) Archetype in dir: C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Q
ue 06  Maven\que06
[INFO] ----------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ----------------------------------------------------------------------
[INFO] Total time:  02:31 min
[INFO] Finished at: 2023-09-30T20:49:48+05:30
[INFO] ----------------------------------------------------------------------

C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven>
```

> Desktop > SDET > SDET-Basic Techademy > Comprehensive Assignment - Vajintha Chandran > Que 06 Maven > que06 >

Name	Date modified	Type	Size
src	9/30/2023 8:49 PM	File folder	
pom.xml	9/30/2023 8:49 PM	xmlfile	1 KB

Default pom file:

```
1   <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
2     xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
3     <modelVersion>4.0.0</modelVersion>
4     <groupId>Question6</groupId>
5     <artifactId>que06</artifactId>
6     <packaging>jar</packaging>
7     <version>1.0-SNAPSHOT</version>
8     <name>que06</name>
9     <url>http://maven.apache.org</url>
10    <dependencies>
11      <dependency>
12        <groupId>junit</groupId>
13        <artifactId>junit</artifactId>
14        <version>3.8.1</version>
15        <scope>test</scope>
16      </dependency>
17    </dependencies>
18  </project>
```

Added below dependencies into pom.xml file:

```xml
 1    <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 2      xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
 3        <modelVersion>4.0.0</modelVersion>
 4        <groupId>Question6</groupId>
 5        <artifactId>que06</artifactId>
 6        <packaging>jar</packaging>
 7        <version>1.0-SNAPSHOT</version>
 8        <name>que06</name>
 9        <url>http://maven.apache.org</url>
10        <build>
11            <plugins>
12                <plugin>
13                    <artifactId>maven-compiler-plugin</artifactId>
14                    <version>3.1</version>
15                    <configuration>
16                        <source>1.8</source>
17                        <target>1.8</target>
18                    </configuration>
19                </plugin>
20                <plugin>
21                    <groupId>org.apache.maven.plugins</groupId>
22                    <artifactId>maven-surefire-plugin</artifactId>
23                    <version>2.16</version>
24                    <configuration>
25                        <suiteXmlFiles>
26                            <suiteXmlFile>testng.xml</suiteXmlFile>
27                        </suiteXmlFiles>
28                    </configuration>
29                </plugin>
30            </plugins>
31        </build>
32        <dependencies>
33            <dependency>
34                <groupId>org.seleniumhq.selenium</groupId>
35                <artifactId>selenium-java</artifactId>
36                <version>4.13.0</version>
37            </dependency>
38            <dependency>
39                <groupId>org.testng</groupId>
40                <artifactId>testng</artifactId>
41                <version>7.8.0</version>
42                <scope>compile</scope>
43            </dependency>
44            <dependency>
45                <groupId>org.apache.poi</groupId>
46                <artifactId>poi</artifactId>
47                <version>5.2.4</version>
48            </dependency>
49            <dependency>
50                <groupId>org.apache.poi</groupId>
51                <artifactId>poi-ooxml</artifactId>
52                <version>5.2.4</version>
53            </dependency>
54        </dependencies>
55    </project>
```

Created below java files in the "src" folder and added the code. And added the testing.xml:

Name	Date modified	Type	Size
Basic_utilities_TestNG	10/1/2023 12:15 AM	Java Source File	2 KB
Question3_TestNG	9/30/2023 10:02 PM	Java Source File	2 KB
Question4_TestNG	9/30/2023 10:02 PM	Java Source File	2 KB
ReadAnWriteDate	10/1/2023 2:53 AM	Java Source File	3 KB
StudentDetails	9/29/2023 11:33 AM	Microsoft Excel W...	9 KB

Name	Date modified	Type	Size
src	10/1/2023 1:40 AM	File folder	
target	10/1/2023 3:18 AM	File folder	
chromedriver	9/29/2023 1:53 PM	Application	16,183 KB
pom.xml	10/1/2023 3:17 AM	xmlfile	2 KB
StudentDetails	9/29/2023 11:33 AM	Microsoft Excel W...	9 KB
testng.xml	10/1/2023 12:28 AM	xmlfile	1 KB

Navigated inside of the project folder:

```
C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven>cd que06

C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>
```

Used mvn validate command:

```
C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>mvn validate
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------< Question6:que06 >------------------------
[INFO] Building que06 1.0-SNAPSHOT
[INFO]    from pom.xml
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  0.122 s
[INFO] Finished at: 2023-10-01T00:44:35+05:30
[INFO] ------------------------------------------------------------------------

C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>
```

Used mvn compile command:

```
C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>mvn compile
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------< Question6:que06 >------------------------
[INFO] Building que06 1.0-SNAPSHOT
[INFO]    from pom.xml
[INFO] --------------------------------[ jar ]---------------------------------
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/3.3.1/maven-resources-plugin-3.3.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/3.3.1/maven-resources-plugin-3.3.1.pom (8.2 kB
at 8.3 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/39/maven-plugins-39.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/39/maven-plugins-39.pom (8.1 kB at 42 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/39/maven-parent-39.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/39/maven-parent-39.pom (48 kB at 142 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/29/apache-29.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/29/apache-29.pom (21 kB at 113 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/3.3.1/maven-resources-plugin-3.3.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/3.3.1/maven-resources-plugin-3.3.1.jar (31 kB
at 161 kB/s)
```
.
.
.
```
[WARNING] /C:/Users/Vajintha C/Desktop/SDET/SDET-Basic Techademy/Comprehensive Assignment - Vajintha Chandran/Que 06  Maven/que06/src/main/java/Question6/Re
adAnWriteDate.java: Recompile with -Xlint:unchecked for details.
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  02:50 min
[INFO] Finished at: 2023-10-01T00:49:11+05:30
[INFO] ------------------------------------------------------------------------

C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>
```

Used mvn test command:

```
C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>mvn test
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------< Question6:que06 >------------------------
[INFO] Building que06 1.0-SNAPSHOT
[INFO]    from pom.xml
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- resources:3.3.1:resources (default-resources) @ que06 ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\
que06\src\main\resources
[INFO]
[INFO] --- compiler:3.1:compile (default-compile) @ que06 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ que06 ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\
que06\src\test\resources
[INFO]
[INFO] --- compiler:3.1:testCompile (default-testCompile) @ que06 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- surefire:2.16:test (default-test) @ que06 ---
[INFO] No tests to run.
[INFO] Surefire report directory: C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06\tar
get\surefire-reports

-------------------------------------------------------
 T E S T S
-------------------------------------------------------
Running TestSuite
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
ERROR StatusLogger Log4j2 could not find a logging implementation. Please add log4j-core to the classpath. Using SimpleLogger to log to the console...
```

```
Oct 01, 2023 12:53:04 AM org.openqa.selenium.remote.http.WebSocket$Listener onError
WARNING: Connection reset
java.net.SocketException: Connection reset
        at java.base/sun.nio.ch.SocketChannelImpl.throwConnectionReset(SocketChannelImpl.java:401)
        at java.base/sun.nio.ch.SocketChannelImpl.read(SocketChannelImpl.java:434)
        at io.netty.buffer.PooledByteBuf.setBytes(PooledByteBuf.java:254)
        at io.netty.buffer.AbstractByteBuf.writeBytes(AbstractByteBuf.java:1132)
        at io.netty.channel.socket.nio.NioSocketChannel.doReadBytes(NioSocketChannel.java:357)
        at io.netty.channel.nio.AbstractNioByteChannel$NioByteUnsafe.read(AbstractNioByteChannel.java:151)
        at io.netty.channel.nio.NioEventLoop.processSelectedKey(NioEventLoop.java:788)
        at io.netty.channel.nio.NioEventLoop.processSelectedKeysOptimized(NioEventLoop.java:724)
        at io.netty.channel.nio.NioEventLoop.processSelectedKeys(NioEventLoop.java:650)
        at io.netty.channel.nio.NioEventLoop.run(NioEventLoop.java:562)
        at io.netty.util.concurrent.SingleThreadEventExecutor$4.run(SingleThreadEventExecutor.java:997)
        at io.netty.util.internal.ThreadExecutorMap$2.run(ThreadExecutorMap.java:74)
        at io.netty.util.concurrent.FastThreadLocalRunnable.run(FastThreadLocalRunnable.java:30)
        at java.base/java.lang.Thread.run(Thread.java:1623)

Tests run: 12, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 65.845 sec - in TestSuite

Results :

Tests run: 12, Failures: 0, Errors: 0, Skipped: 0

[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  01:08 min
[INFO] Finished at: 2023-10-01T00:53:05+05:30
[INFO] ------------------------------------------------------------------------

C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>
```
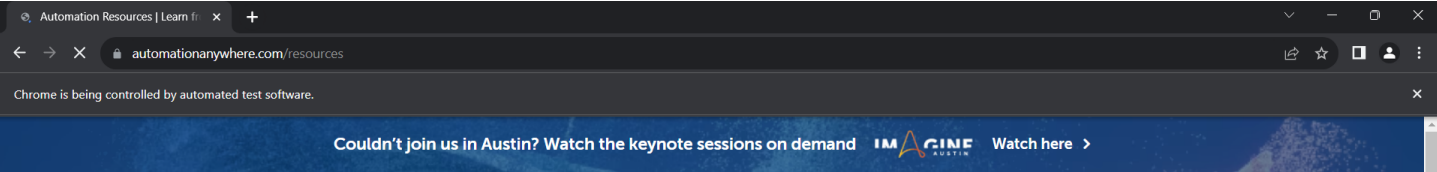

Used mvn package command:

```
C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06> mvn package
[INFO] Scanning for projects...
[INFO]
[INFO] --------------------------< Question6:que06 >--------------------------
[INFO] Building que06 1.0-SNAPSHOT
[INFO]   from pom.xml
[INFO] --------------------------------[ jar ]--------------------------------
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-jar-plugin/3.3.0/maven-jar-plugin-3.3.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-jar-plugin/3.3.0/maven-jar-plugin-3.3.0.pom (6.8 kB at 4.6 kB/s)
)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/37/maven-plugins-37.pom
```

.

.

.

```
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.4.2/plexus-utils-3.4.2.jar (267 kB at 179 kB/s)
[INFO] Building jar: C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06\target\que06-1.0
-SNAPSHOT.jar
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  01:01 min
[INFO] Finished at: 2023-10-01T00:55:55+05:30
[INFO] ------------------------------------------------------------------------

C:\Users\Vajintha C\Desktop\SDET\SDET-Basic Techademy\Comprehensive Assignment - Vajintha Chandran\Que 06  Maven\que06>
```

Name	Date modified	Type	Size
classes	10/1/2023 12:49 AM	File folder	
generated-sources	10/1/2023 12:48 AM	File folder	
maven-archiver	10/1/2023 12:55 AM	File folder	
maven-status	10/1/2023 12:48 AM	File folder	
surefire-reports	10/1/2023 12:55 AM	File folder	
que06-1.0-SNAPSHOT	10/1/2023 12:55 AM	Executable Jar File	9 KB