

## How to Add Selenium Testing to maven heart (pm.xml file)

**UNIT TESTING** is a type of software testing where individual units or components of a software are tested. The purpose is to validate that each unit of the software code performs as expected. Unit Testing is done during the development (coding phase) of an application by the developers. Unit Tests isolate a section of code and verify its correctness. A unit may be an individual function, method, procedure, module, or object.

### Why Unit Testing?

Unit Testing is important because software developers sometimes try saving time doing minimal unit testing and this is myth because inappropriate unit testing leads to high-cost Defect fixing during System Testing, Integration Testing and even Beta Testing after application is built. If proper unit testing is done in early development, then it saves time and money in the end.

### What is Integration Testing?

**INTEGRATION TESTING** is defined as a type of testing where software modules are integrated logically and tested as a group. A typical software project consists of multiple software modules, coded by different programmers. The purpose of this level of testing is to expose defects in the interaction between these software modules when they are integrated. Integration Testing focuses on checking data communication amongst these modules. Hence it is also termed as 'I & T' (Integration and Testing), 'String Testing' and sometimes 'Thread Testing'

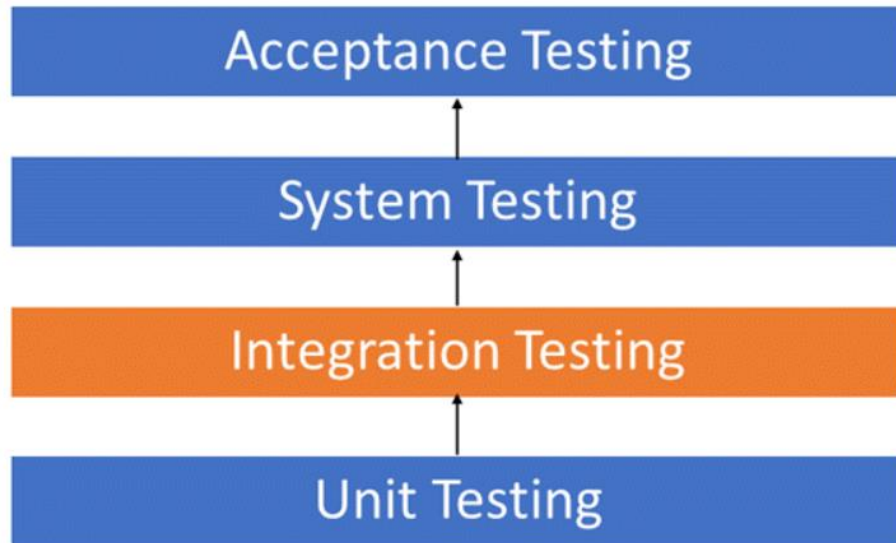
### System testing

System testing, also referred to as system-level tests or system-integration testing, is the **process in which a quality assurance (QA) team evaluates how the various components of an application interact together in the full, integrated system or application.**

### Acceptance testing

In DeVops engineering and its various subdisciplines, acceptance testing is a test conducted to determine if the requirements of a specification of the software are met.

### Why do Integration Testing?



Usually, the Unit and Integration tests are done manually. However, selenium has ability to do the unit and integration test which saves the company a lot of time and money.

### Step 1

We need to get the selenium dependencies so that we can add them to the pom.xml file

Go to

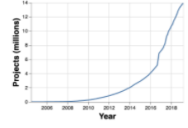
Link: <https://mvnrepository.com/>

← → ↻ ↗ 🔒 mvnrepository.com

Apps Google RivPage RivPage Welcome! - Americ... bb JWI575004JWONL... N4325 KNOWLEDG... New Tab Gmail YouTube Maps EvansBUSN311.d

**MVNREPOSITORY** Search for groups, artifacts, categories Search


**Indexed Artifacts (25.7M)**





**Popular Categories**

- Aspect Oriented
- Actor Frameworks
- Application Metrics
- Build Tools
- Bytecode Libraries
- Command Line Parsers
- Cache Implementations

**What's New in Maven**

**Ruthless**  
dev.lajoscseppento.ruthless » ruthless-plugin » 0.3.0  
Ruthless conventions for Gradle projects to keep them DRY  
Last Release on Feb 6, 2022  
6 usages Apache

**DNSJava**  
dnsjava » dnsjava » 3.5.0  
dnsjava is an implementation of DNS in Java. It supports all defined record types (including the DNSSEC types), and unknown types. It can be used for queries, zone transfers, and dynamic updates. It includes a cache which can be used by clients, and a minimal implementation of a server. It supports TSIG authenticated messages, partial DNSSEC verification, and EDNS0.  
Last Release on Feb 5, 2022  
275 usages BSD

**Celesta Core**  
6 usages

## Step 2

In the mvnrepository, type **selenium** in the search box

**MVNREPOSITORY** selenium Search

**Repository**

- Central 752
- Sonatype 245
- Spring Lib M 166
- Spring Plugins 161
- JCenter 52
- Spring Lib Release 27
- Atlassian Public 25
- Clarius 24

**Found 942 results**

Sort: **relevance** | popular | newest

**1. Selenium Java**  
org.seleniumhq.selenium » selenium-java  
Selenium automates browsers. That's it! What you do with that power is entirely up to you.  
Last Release on Jan 30, 2022  
1,457 usages Apache

## Step 3

Select the selenium java and click on the link

**MVNREPOSITORY** selenium Search

**Repository**

- Central 752
- Sonatype 245
- Spring Lib M 166
- Spring Plugins 161
- JCenter 52
- Spring Lib Release 27
- Atlassian Public 25
- Clarius 24

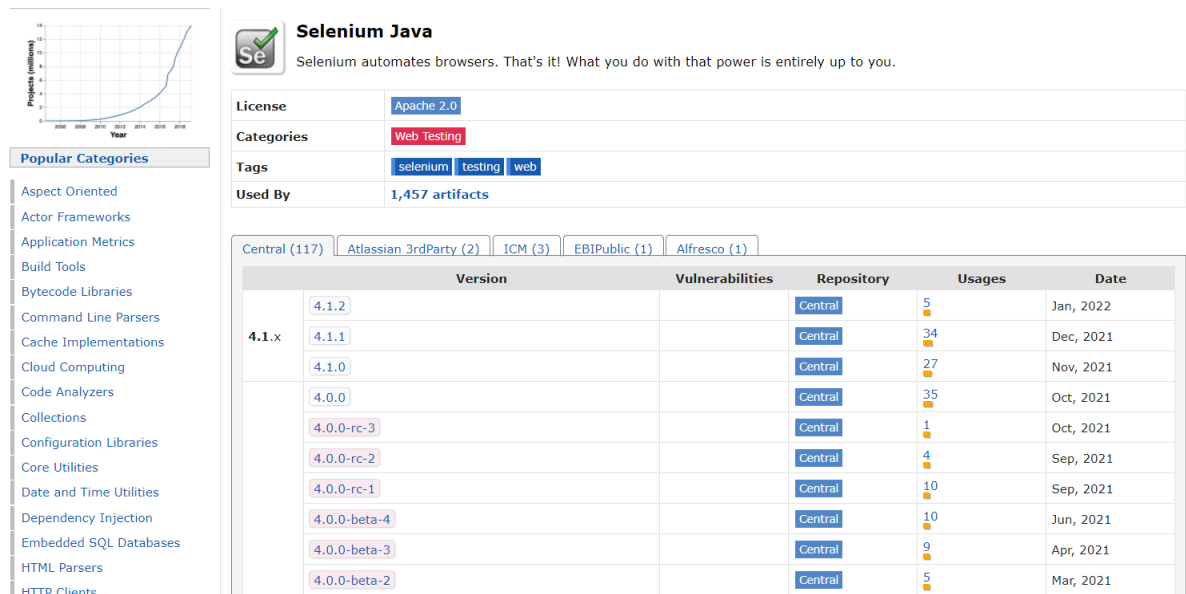
**Found 942 results**

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## Step 4

Select the latest version of 4.1.2

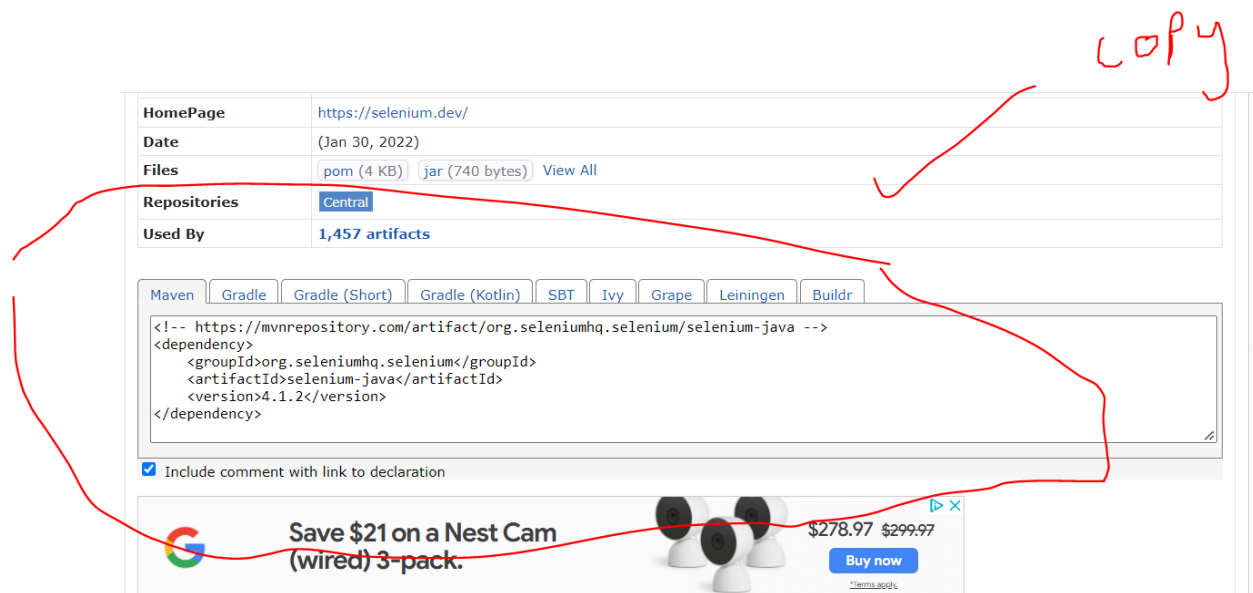


The screenshot shows the Selenium Java project page on Maven Central. On the left, there's a sidebar with 'Popular Categories' and a list of categories like 'Aspect Oriented', 'Actor Frameworks', etc. The main content area shows the project details for 'Selenium Java'. It includes a license of 'Apache 2.0', categories of 'Web Testing', tags of 'selenium', 'testing', and 'web', and is used by '1,457 artifacts'. Below this, there's a table of versions. The '4.1.x' series is expanded, showing versions from 4.1.2 down to 4.0.0-beta-2. The '4.1.2' version is highlighted as the latest. The table columns are 'Version', 'Vulnerabilities', 'Repository', 'Usages', and 'Date'.

Version	Vulnerabilities	Repository	Usages	Date
4.1.2		Central	5	Jan, 2022
4.1.1		Central	34	Dec, 2021
4.1.0		Central	27	Nov, 2021
4.0.0		Central	35	Oct, 2021
4.0.0-rc-3		Central	1	Oct, 2021
4.0.0-rc-2		Central	4	Sep, 2021
4.0.0-rc-1		Central	10	Sep, 2021
4.0.0-beta-4		Central	10	Jun, 2021
4.0.0-beta-3		Central	9	Apr, 2021
4.0.0-beta-2		Central	5	Mar, 2021

Step 5

Copy the html links



The screenshot shows the Selenium Java artifact page on Maven Central. It includes fields for 'HomePage' (https://selenium.dev/), 'Date' (Jan 30, 2022), 'Files' (pom (4 KB), jar (740 bytes)), 'Repositories' (Central), and 'Used By' (1,457 artifacts). Below this, there's a section for 'Maven' with tabs for 'Gradle', 'Gradle (Short)', 'Gradle (Kotlin)', 'SBT', 'Ivy', 'Grape', 'Leiningen', and 'Buildr'. The 'Maven' tab is selected, showing the following dependency code:

```
<!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->
<dependency>
  <groupId>org.seleniumhq.selenium</groupId>
  <artifactId>selenium-java</artifactId>
  <version>4.1.2</version>
</dependency>
```

A red line is drawn across the page, starting from the 'Files' section, passing through the 'Maven' tab, and ending at the 'dependency' code. A red checkmark is placed next to the 'Files' section. The word 'copy' is written in red above the 'Files' section. At the bottom of the page, there's a Google advertisement for a Nest Cam (wired) 3-pack, with a price of \$278.97 (reduced from \$299.97) and a 'Buy now' button.

Step 6

Go to

Link: <https://github.com/joshking1/myRepoForJavaApp.git>

## Step 7

Locate the pom.xml file in this repo and add the html code you copied from the maven repository

myRepoForJavaApp / MyWebApp / pom.xml in master

<> Edit file    Preview changes

```
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>com.mkyong</groupId>
5   <artifactId>MyWebApp</artifactId>
6   <packaging>war</packaging>
7   <version>1.0-SNAPSHOT</version>
8   <name>MyWebApp Maven Webapp</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  <!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->
19  <dependency>
20    <groupId>org.seleniumhq.selenium</groupId>
21    <artifactId>selenium-java</artifactId>
22    <version>4.1.2</version>
23  </dependency>
24  <build>
25    <finalName>MyWebApp</finalName>
26  </build>
27 </project>
28
```

ALTER ✓