

Software Hardware List

| Chapter number | Software required (With version) | Free/Proprietary | If proprietary, can code testing be performed using a trial version | If proprietary, then cost of the software | Download links to the software | Hardware specifications | OS required |
|----------------|----------------------------------|------------------|---|---|---|----------------------------------|---------------------------|
| 1 - 18 | JDK 12 | Free | N/A | N/A | https://www.oracle.com/technetwork/java/javase/downloads/index.html | 2GB RAM and 10GB free disk space | Windows, Linux, or Mac OS |
| 1 - 18 | Source Control Tool Git | Free | N/A | N/A | https://git-scm.com/downloads | N/A | See above |
| 10 | PostgreSQL 11.2 | Free | N/A | N/A | https://www.postgresql.org/download/ | 2GB RAM and 10GB free disk space | See above |
| 10 | PostgreSQL | Free | N/A | N/A | <dependency> <groupId>org.postgresql</groupId> <artifactId>postgresql</artifactId> <version>42.2.2</version> </dependency> | N/A | See above |
| 5, 6, 7 | Commons Lang3 library | Free | N/A | N/A | <dependency> <groupId>org.apache.commons</groupId> <artifactId>commons-lang3</artifactId> <version>3.8.1</version> </dependency> | N/A | See above |
| 5, 6, 7 | Commons Collections Library | Free | N/A | N/A | <dependency> <groupId>org.apache.commons</groupId> <artifactId>commons-collections4</artifactId> <version>4.1</version> </dependency> | N/A | See above |
| 5, 6, 7 | Log4j Framework | Free | N/A | N/A | <dependency> <groupId>org.apache.logging.log4j</groupId> <artifactId>log4j-api</artifactId> <version>2.11.1</version> </dependency> <dependency> <groupId>org.apache.logging.log4j</groupId> <artifactId>log4j-core</artifactId> <version>2.11.1</version> </dependency> | N/A | See above |
| 5, 6, 7 | Commons Codec Library | Free | N/A | N/A | <dependency> <groupId>commons-codec</groupId> <artifactId>commons-codec</artifactId> <version>1.11</version> </dependency> | N/A | See above |
| 7 | JUnit Framework | Free | N/A | N/A | <dependency> <groupId>junit</groupId> <artifactId>junit</artifactId> <version>4.12</version> <scope>test</scope> </dependency> | N/A | See above |

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|----|-----------------------------|------|-----|-----|---|-----|-----------|
| 7 | Mockito Framework | Free | N/A | N/A | <dependency> <groupId>org.mockito</groupId> <artifactId>mockito-core</artifactId> <version>2.23.4</version> <scope>test</scope> </dependency> | N/A | See above |
| 12 | JavaFX GUI Framework | Free | N/A | N/A | <dependency> <groupId>org.openjfx</groupId> <artifactId>javafx-controls</artifactId> <version>11.0.2</version> </dependency> <dependency> <groupId>org.openjfx</groupId> <artifactId>javafx-fxml</artifactId> <version>11.0.2</version> </dependency> <dependency> <groupId>org.openjfx</groupId> <artifactId>javafx-web</artifactId> <version>11.0.2</version> </dependency> | N/A | See above |
| 13 | Annotations Library | Free | N/A | N/A | <dependency> <groupId>org.jetbrains</groupId> <artifactId>annotations</artifactId> <version>16.0.2</version> </dependency> | N/A | See above |
| 15 | RxJava Library | Free | N/A | N/A | <dependency> <groupId>io.reactivex</groupId> <artifactId>rxjava</artifactId> <version>2.2.7</version> </dependency> | N/A | See above |
| 16 | Vert.x Development Kit | Free | N/A | N/A | <dependency> <groupId>io.vertx</groupId> <artifactId>vertx-web</artifactId> <version>3.6.3</version> </dependency> <dependency> <groupId>io.vertx</groupId> <artifactId>vertx-rx-java</artifactId> <version>3.6.3</version> </dependency> | N/A | See above |
| 17 | Java Microbenchmark Harness | Free | N/A | N/A | <dependency> <groupId>org.openjdk.jmh</groupId> <artifactId>jmh-core</artifactId> <version>1.21</version> </dependency> <dependency> <groupId>org.openjdk.jmh</groupId> <artifactId>jmh-generator-annprocess</artifactId> <version>1.21</version> </dependency> | N/A | See above |

Detailed installation steps are as follows:

1. JDK 12 and PostgreSQL 11.2:
 1. Download the installer from the link specified above
 2. Double-click the installer and accept all default values
2. Other software:
 1. Add the specified above dependency to the Maven `pom.xml`
 2. Let the system install it automatically
3. The source code for programming examples:
 1. Download and install Git from link listed above

2. Clone code source repository from GitHub: `https://github.com/PacktPublishing/Learn-Java-12-Programming`