# Software specifications

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| 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 |
| All | Java (8u77) | Free |  |  | https://java.com/en/download/ | MacBook Pro or Linux (CentOS/Debian) | MacOS/Linux |
| All | Scala(2.11.7+) | Free |  |  | http://www.scala-lang.org/download | MacBook Pro or Linux (CentOS/Debian) | MacOS/Linux |
| All | Spark 1.6.1 | Free |  | $0 | http://spark.apache.org/downloads.html | MacBook Pro or Linux (CentOS/Debian) | MacOS/Linux |
| 8 | R (3.2.3+) | Free |  |  | http://cran.r-project.org/bin/macosx | MacBook Pro or Linux (CentOS/Debian | MacOS/Linux |
| 8 | Python (2.7.11+) | Free |  |  | http://python.org/ftp/python/$PYTHON\_VERSION/Python-$PYTHON\_VERSION.tar.xz | MacBook Pro or Linux (CentOS/Debian | MacOS/Linux |

# Detailed installation steps (software-wise)

The steps should be listed in a way that it prepares the system environment to be able to test the codes of the book.

The software installation is covered in the book, but in general:

1. Java
   1. On Mac, it is a part of the Standard System image
   2. On Linux, download an rpm from the Sun Java Download and install with ` rpm -ivh jdk-8u77-linux-x64.rpm`
2. Scala
   1. On Mac, `brew install scala`
   2. On Linux, download an rpm from http://www.scala-lang.org/download and install with ` rpm -ivh scala-2.11.7.rpm`
3. Spark
   1. Download the spark distribution from http://spark.apache.org/downloads.html
   2. Untar `tar xvf …`
   3. Make sure you have Java installes and JAVA\_HOME is pointing to the installation
   4. You are ready to go
4. R
   1. On Mac R has an .dmg installer
   2. Follow instructions on <http://cran.r-project.org/bin/linux> for the Linux install
5. Python
   1. You need “Development Tools” installed on Linux (and gcc compiler on Mac)
   2. On Mac `brew install python`, on Linux:
   3. export PYTHON\_VERSION=2.7.11
   4. wget --no-check-certificate http://python.org/ftp/python/$PYTHON\_VERSION/Python-$PYTHON\_VERSION.tar.xz
   5. tar xf Python-$PYTHON\_VERSION.tar.xz
   6. cd $HOME/Python-$PYTHON\_VERSION
   7. ./configure --prefix=/usr/local --enable-unicode=ucs4 --enable-shared LDFLAGS="-Wl,-rpath /usr/local/lib"
   8. make clean; make
   9. sudo make altinstall
   10. sudo ln -sf /usr/local/bin/python2.7 /usr/local/bin/python
   11. wget https://bootstrap.pypa.io/ez\_setup.py
   12. sudo /usr/local/bin/python ez\_setup.py
   13. sudo /usr/local/bin/easy\_install-2.7 pip
   14. sudo /usr/local/bin/pip install --upgrade avro nose numpy scipy pandas statsmodels scikit-learn iso8601 python-dateutil python-snappy