

## 1. Installation guide of joPAS-DEMO

### 1.1. What is joPAS?

The joPAS API has been created by Group PAS of the University of Deusto. It allows the programmer to use the Octave language calculation power from Java, the user can create programs in Java with the advantage of implementing all the mathematical part in Octave. In addition, the syntax of Octave is compatible with Matlab, and all the sentences created for Matlab also can be used in joPAS.

### 1.2. Requirements

In order to be able to develop applications using the joPAS API, the java JDK 1.5 version and Octave interpreters must be installed.

### 1.3. Linux installation of joPAS-DEMO

1) Install of JAVA JDK 1.5 version from <http://java.sun.com>

a. Download Java Linux self-installation JDK

```
javivi@ubuntu64:~/Download/java $ ls
jdk-1_5_0_06-linux-amd64.bin
```

b. Create the Deb package for Debian distributions.

```
javivi@ubuntu64:~/Download/java $ fakeroot make-jpkg jdk-1_5_0_06-linux-amd64.bin
javivi@ubuntu64:~/Download/java $ ls
jdk-1_5_0_06-linux-amd64.bin sun-j2sdk1.5_1.5.0+update06_amd64.deb
```

c. Install the Debian package.

```
root@ubuntu64:~/Download/java # dpkg -i sun-j2sdk1.5_1.5.0+update06_amd64.deb
```

d. Check the running JAVA compiler version.

```
root@ubuntu64:/home/javivi/Download/java # javac -version
javac 1.5.0_06
```

e. Check the running JAVA virtual machine.

```
root@ubuntu64:/home/javivi/Download/java # java -version
java version "1.5.0_06"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_06-b05)
Java HotSpot(TM) 64-Bit Server VM (build 1.5.0_06-b05, mixed mode)
```

- 2) Install Octave interpreter from <http://octave.sourceforge.net>
  - a. Install OCTAVE-FORGE package

```
apt-get install octave-forge
```

- b. Check OCTAVE installation

```
GNU Octave, version 2.1.71 (x86_64-pc-linux-gnu).
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This is free software; see the source code for copying conditions.
There is ABSOLUTELY NO WARRANTY; not even for MERCHANTABILITY or
FITNESS FOR A PARTICULAR PURPOSE. For details, type `warranty'.

Additional information about Octave is available at http://www.octave.org.

Please contribute if you find this software useful.
For more information, visit http://www.octave.org/help-wanted.html

Report bugs to <bug@octave.org> (but first, please read
http://www.octave.org/bugs.html to learn how to write a helpful report).

octave:1> a=6
a = 6
octave:2> b=4
b = 4
octave:3> y=[a b]
y =

    6    4

octave:4> max(y)
ans = 6
octave:5>
```

- 3) Download joPAS-DEMO from <http://jopas.sourceforge.net>
  - a. Extract the file and check the contents.

```
javivi@ubuntu64:~ $ tar -xvzf joPAS-DEMO.tar.gz
joPAS-DEMO/
joPAS-DEMO/compile
joPAS-DEMO/Demo.java
joPAS-DEMO/DemoDialog.java
joPAS-DEMO/joPAS (blanco).png
joPAS-DEMO/JOPAS.jar
joPAS-DEMO/JOPAS.properties
joPAS-DEMO/run
joPAS-DEMO/joPAS-DEMO.tar.gz
javivi@ubuntu64:~ $ cd joPAS-DEMO
```

b. Check the “JOPAS.properties”, and ensure that it contains the following value.

```
Octave_path = octave
```

c. Compile joPAS-DEMO.

```
javivi@ubuntu64:~/joPAS-DEMO $ javac -classpath ./JOPAS.jar -deprecation *.java

Demo.java:128: warning: [deprecation] show() in java.awt.Window has been deprecated
    this.show();
    ^
1 warning
```

d. Run joPAS-DEMO.

```
java -classpath ./:./JOPAS.jar Demo
```

e. Check the result

