Create Groovy Scripts Using ImageJ Macro Recorder

Summary: You can use ImageJ Macro Recorder to recorder to commands for a Groovy script. Simply set macro type to JavaScript, record commands, create script, copy content to Groovy Console and add imports as needed.

Here are the steps.

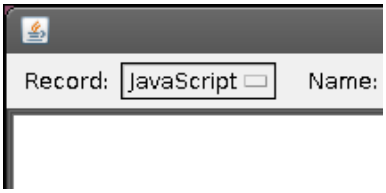
1. Open Groovy Console

Select Plugins > Scripting > Groovy Console, you will put you script and execute it there.

2. Open Macro Recorder

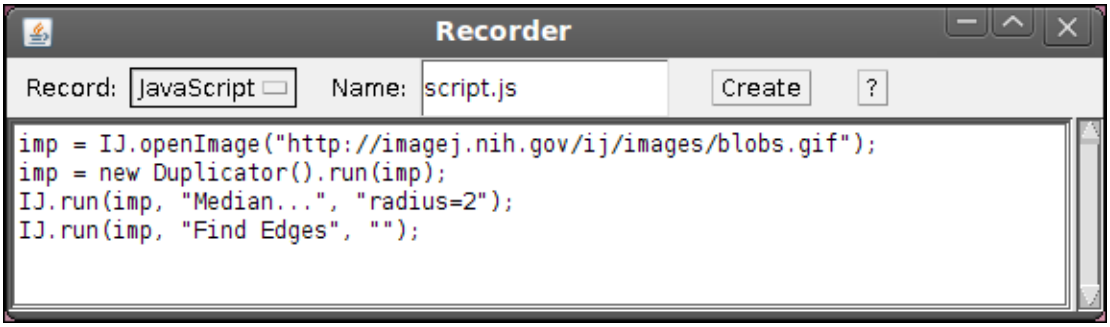
Select Plugins > Macros > Record

3. Set type to JavaScript



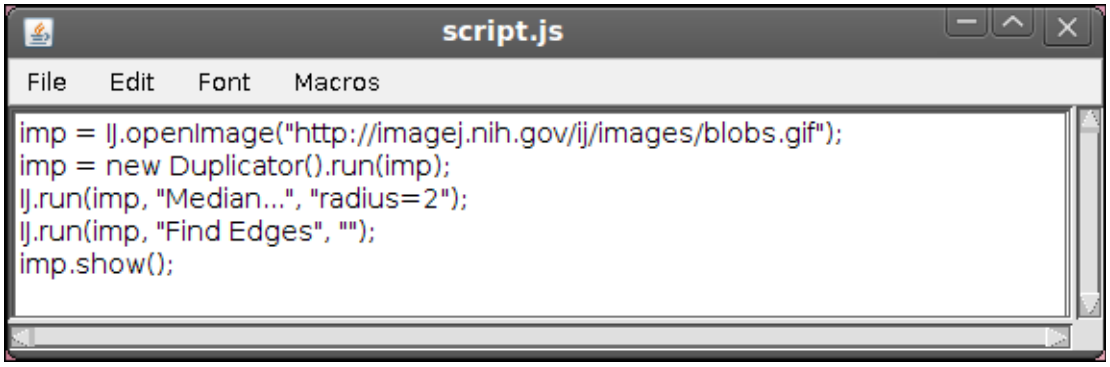
Create JavaScript commands will have the same syntax as Groovy.

4. Perform some commands



5. Create script

Once done with recording create script by pressing “Create” button in the Macro Recorder window.



6. Cut-and-paste recorded script into Groovy Console editor

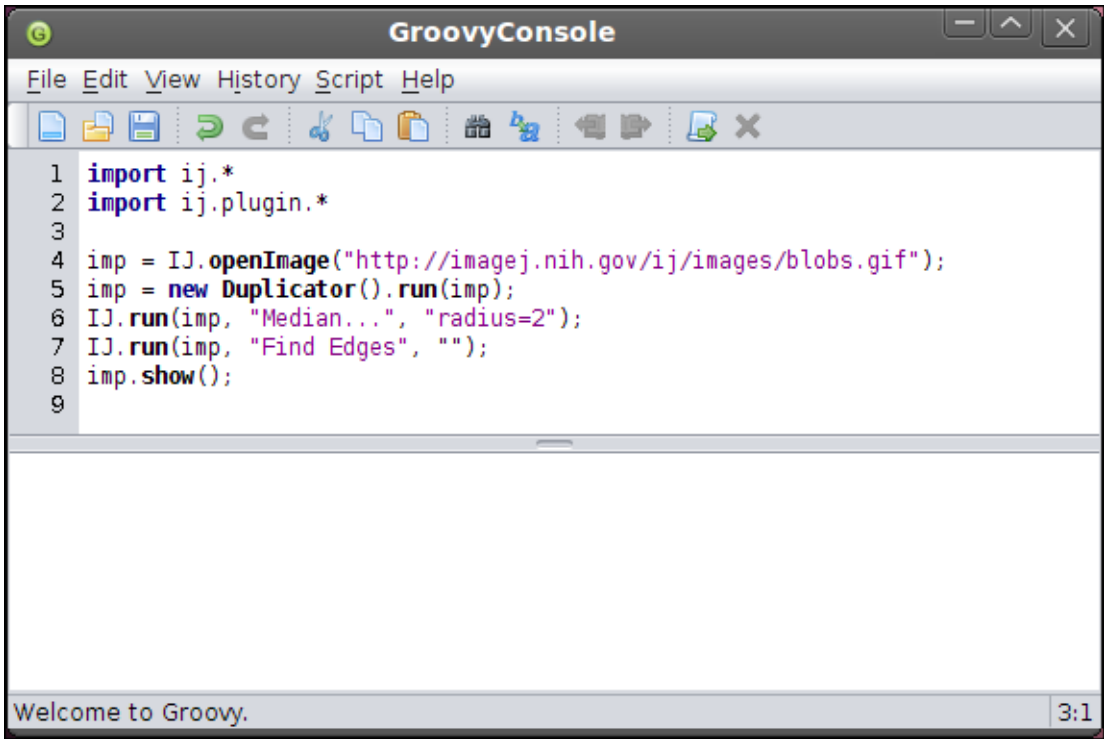
In the text window select Edit > Select All, then select Edit > Copy. In groovy Console select Edit > Paste

7. Add "imports"

Before you can run the code you need to indicate where to find `IJ` and `Duplicator` classes in the example above. The first is in the package `ij` the second in `ij.plugin`, so add following at the beginning of the Groovy script

```
import ij.*
import ij.plugin.*
```

Now the Groovy script and you are ready to go.

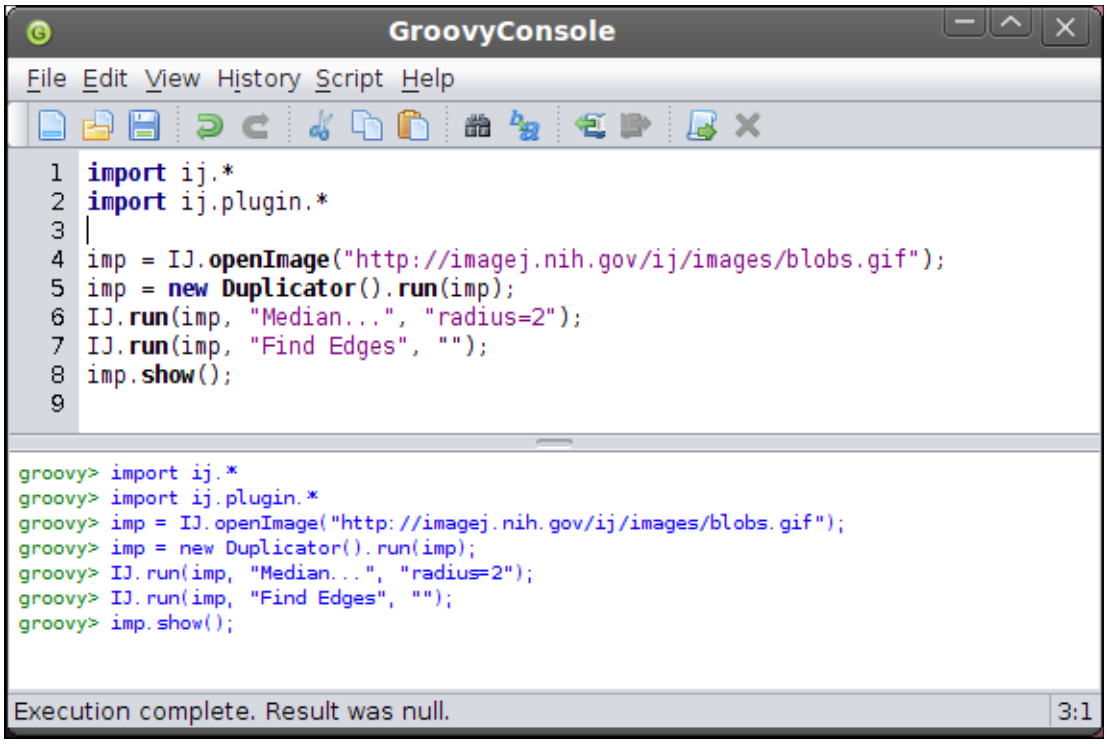


You can find where ImageJ classes are located using the API documentation at http://rsb.info.nih.gov/ij/developer/api/index.html. Search for class name in the left bottom frame, click on the class name, its description will show on the right. If you do now want to search you can simply add all ImageJ packages

```
import ij.*
import ij.gui.*
import ij.io.*
import ij.macro.*
import ij.measure.*
import ij.plugin.*
import ij.plugin.filter.*
import ij.plugin.frame.*
import ij.process.*
import ij.text.*
import ij.util.*
```

8. Run Groovy script

You can now run the script selecting Script > Run or pressing Ctrl-R.


GroovyConsole
File Edit View History Script Help
1 import ij.*
2 import ij.plugin.*
3
4 imp = IJ.openImage("http://imagej.nih.gov/ij/images/blobs.gif");
5 imp = new Duplicator().run(imp);
6 IJ.run(imp, "Median...", "radius=2");
7 IJ.run(imp, "Find Edges", "");
8 imp.show();
9
groovy> import ij.*
groovy> import ij.plugin.*
groovy> imp = IJ.openImage("http://imagej.nih.gov/ij/images/blobs.gif");
groovy> imp = new Duplicator().run(imp);
groovy> IJ.run(imp, "Median...", "radius=2");
groovy> IJ.run(imp, "Find Edges", "");
groovy> imp.show();
Execution complete. Result was null.
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