

# Creating script

Let's describe creating a script in an example. We will create a script showing a message on a program startup. The creation process consists of three steps:

1. Creating a directory
2. Writing a script descriptor
3. Writing a script code

## Step #1: Create Directory

In the *plugins/com.nomagic.magicdraw.jpython* folder, create a *scripts* sub-folder, and then a folder for the particular script. For example, *plugins/com.nomagic.magicdraw.jpython/scripts/example*

## Step #2: Write Script Descriptor

A script descriptor is a file written in XML and named *script.xml*. The script descriptor provides information about a script file to run, version of script, ID, and other.

In the created directory, create a *script.xml* file:

```
<?xml version="1.0" encoding="UTF-8"?>
<script
  id="example 1"
  name="Simple menu item"
  version="1.0"
  provider-name="No Magic"
  script-file="main.py"
  requiresApi="1.0">
</script>
```

The following table describes the *script.xml* file structure:

| Element | Description       |   |
|---------|-------------------|---|
| script  | <b>Attributes</b> |   |
|         | <b>Name</b>       | <b>Description</b>  |
|         | id                | A scrip ID, should be unique. Used to identify a script. Example: "my.first.script.0" |
|         | name              | A script name. No strict rules applied to this attribute. Example: "Example script"   |
|         | version           | A script version. Allows numbers separated with one dot value. Examples: "1.0", "0.1" |
|         | provider-name     | A script provider name. A company or an author name. Example: "No Magic"              |
|         | script-file       | A relative path to a script file. This file will be executed. Example:"main.py"       |
|         | requires-api      | A program API version required by a script. Example:"1.0"                             |

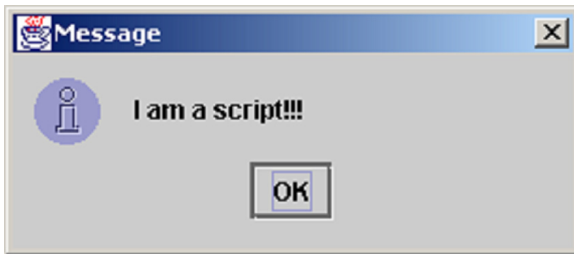
## Step #3: Write Script Code

Then in the same directory, create the *main.py* file:

```
from javax.swing import JOptionPane

# Script starts here
print "Starting script, descriptor", pluginDescriptor
JOptionPane.showMessageDialog( None, "I am a script!!!")
```

After saving files, restart your modeling tool. On a program startup, a message dialog should appear.



### Variables Passed to Script

The program passes the one variable to the script *pluginDescriptor*. This variable contains information from the parsed *script.xml* file. A variable is an instance of a *com.nomagic.magicdraw.jpython.PythonPluginDescriptor* class.

A script can retrieve the script directory and other necessary information from the *pluginDescriptor* variable. There is no need to change any other fields for this variable.