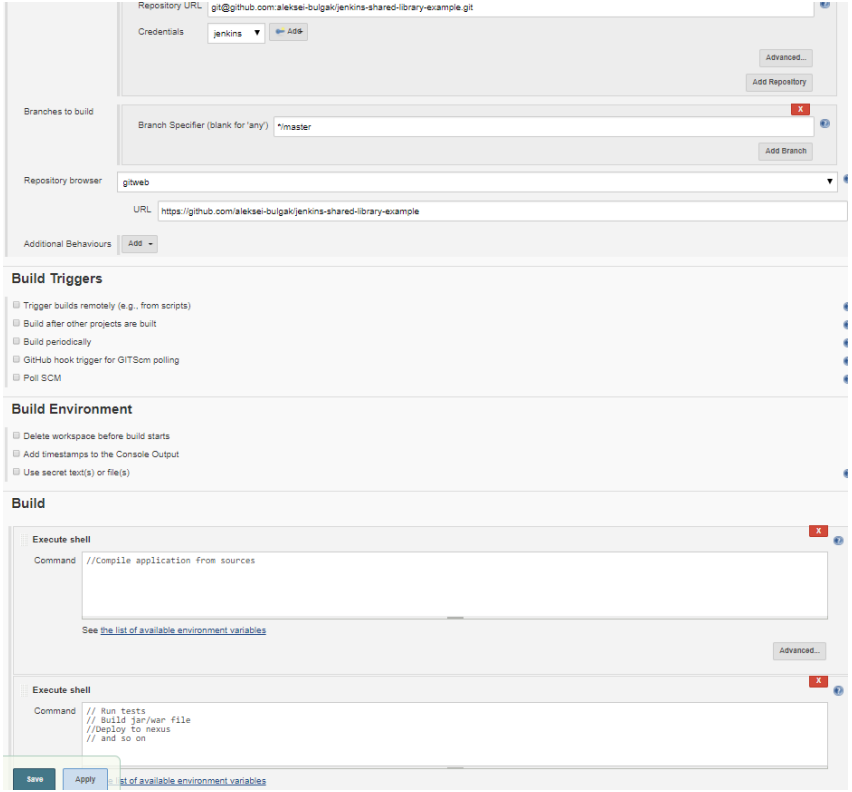
Jenkins
Shared Library

Before Jenkins 2

Manually configure job via jenkins UI
(Freestyle job)



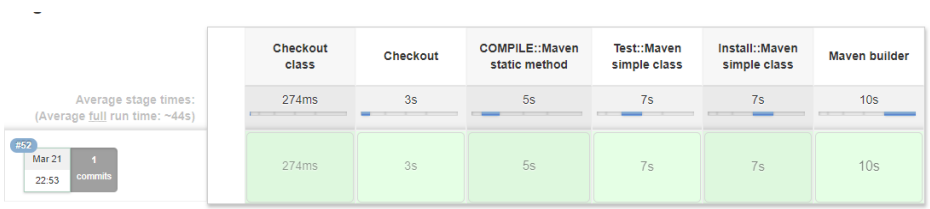
Pluses

- ➔ Easy to create for everybody(dev, qa, manager)
- ➔ Easy to add changes any time
- ➔ In almost all cases each available component accessible from UI should work as described in docs

Minuses

- ➔ Hard to automate job recreation
- ➔ Bash scripting

Jenkins 2 Pipelines




```
pipeline {
    agent any

    stages {
        stage('Build') {
            steps {
                echo 'Building..'
            }
        }
        stage('Test') {
            steps {
                echo 'Testing..'
            }
        }
        stage('Deploy') {
            steps {
                echo 'Deploying....'
            }
        }
    }
}
```

Pluses

- ➔ Easy to automate job recreation
- ➔ Programmatic way of job creation
- ➔ In almost all cases each available component accessible from UI should work as described in docs

Minuses

- ➔ Scripts syntax depends on version of pipeline library
- ➔ Not a Groovy

Backoffice

Proxy service

RMS

Jobs

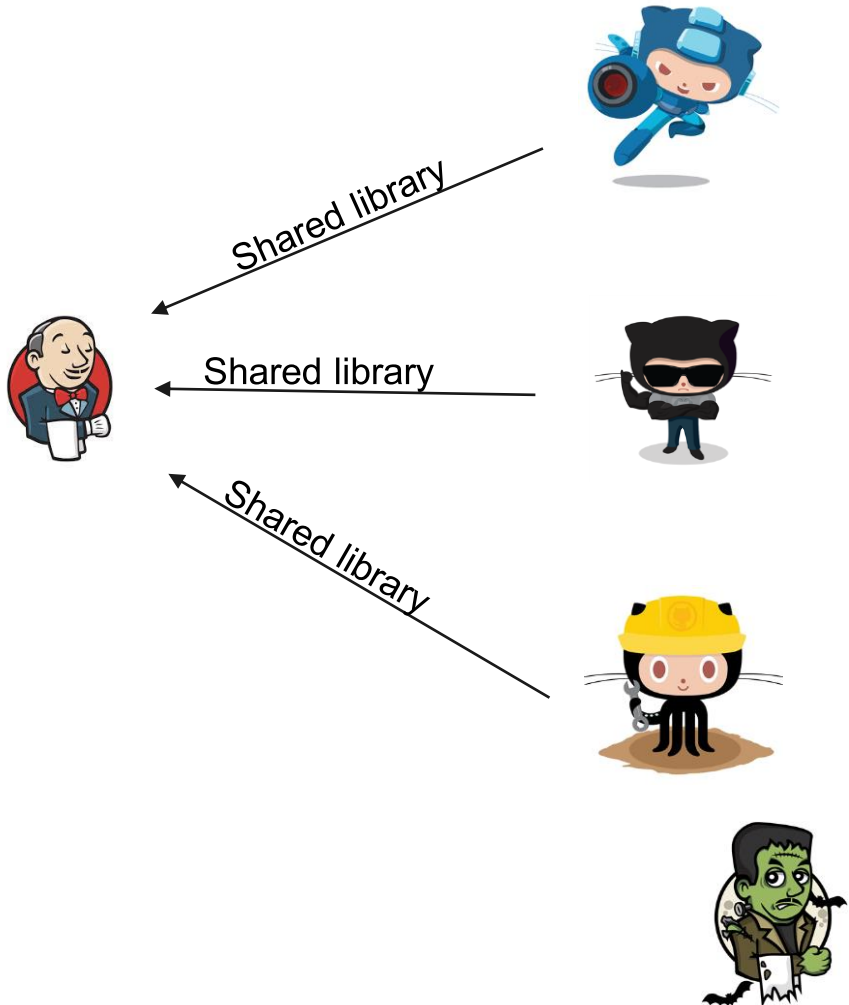
Jobseeker jobs

One big app

ESS

Document storage

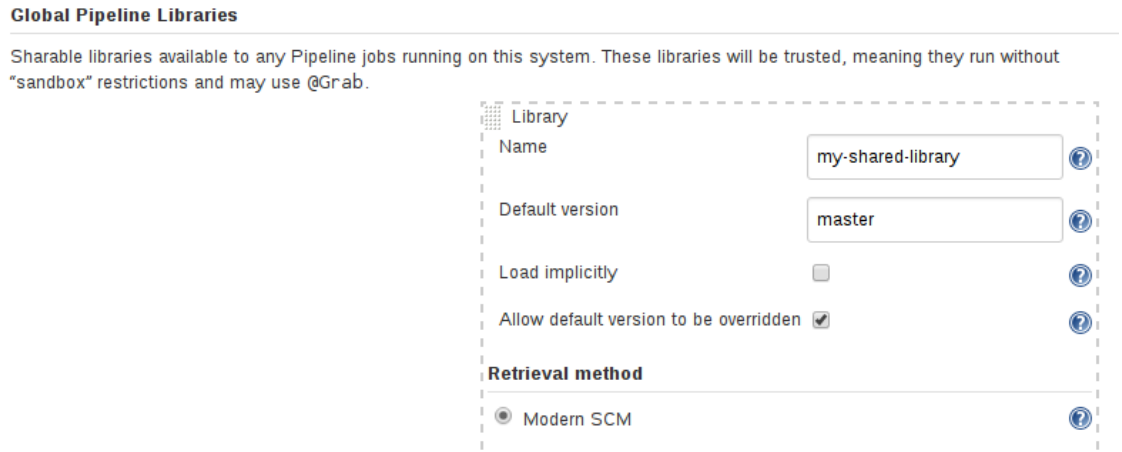
Shared library



Structure

```
(root)
+- src                     # Groovy source files
|   +- org
|       +- foo
|           +- Bar.groovy  # for org.foo.Bar class
+- vars
|   +- foo.groovy          # for global 'foo' variable
|   +- foo.txt             # help for 'foo' variable
+- resources               # resource files (external libraries only)
|   +- org
|       +- foo
|           +- bar.json    # static helper data for org.foo.Bar
```

Import library



vars/

```
@Library('my-shared-library') _
/* Using a version specifier, such as
branch, tag, etc */
@Library('my-shared-library@1.0') _
/* Accessing multiple libraries with one
statement */
@Library(['my-shared-library',
'otherlib@abc1234']) _

library 'my-shared-library'
```

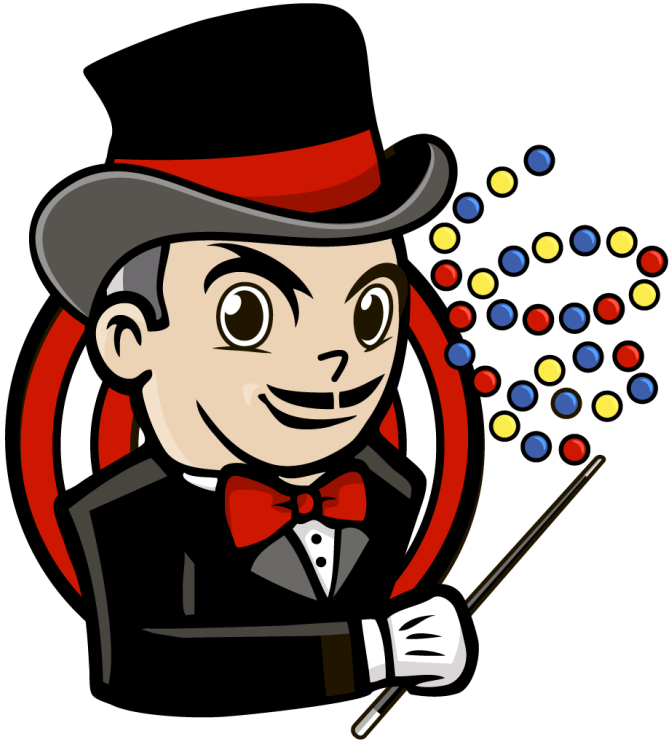
src/

До сих пор не понял как это работает

```
@Library('somelib')
import
com.mycorp.pipeline.somelib.UsefulClass

library('my-shared-
library').com.mycorp.pipeline.Utils.someSt
aticMethod()
```

DEMO 01/02



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@Library

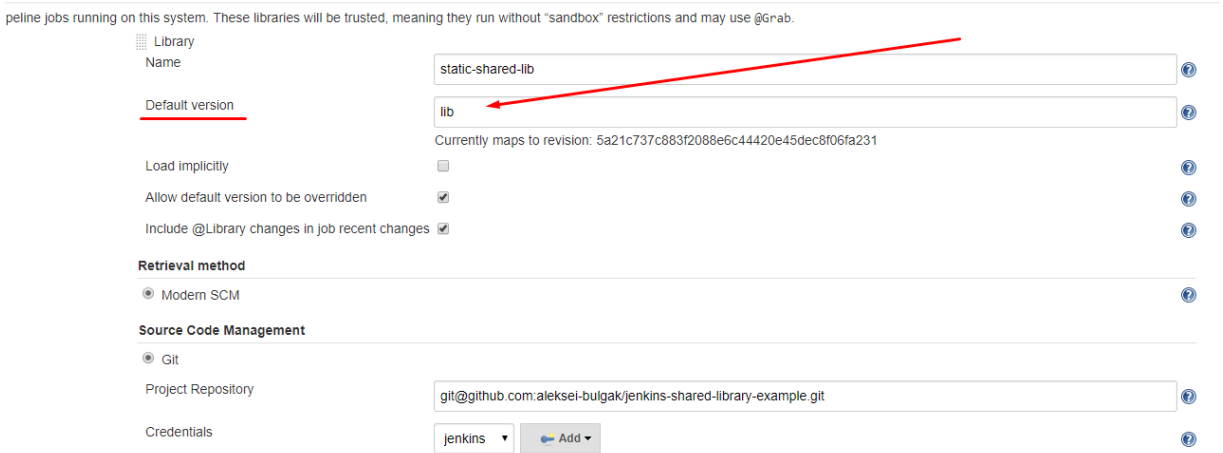
- Libraries are resolved and loaded during *compilation* of the script, before it starts executing
- Use `@Library('lib-name@version') _` if your lib contains only var functions

library

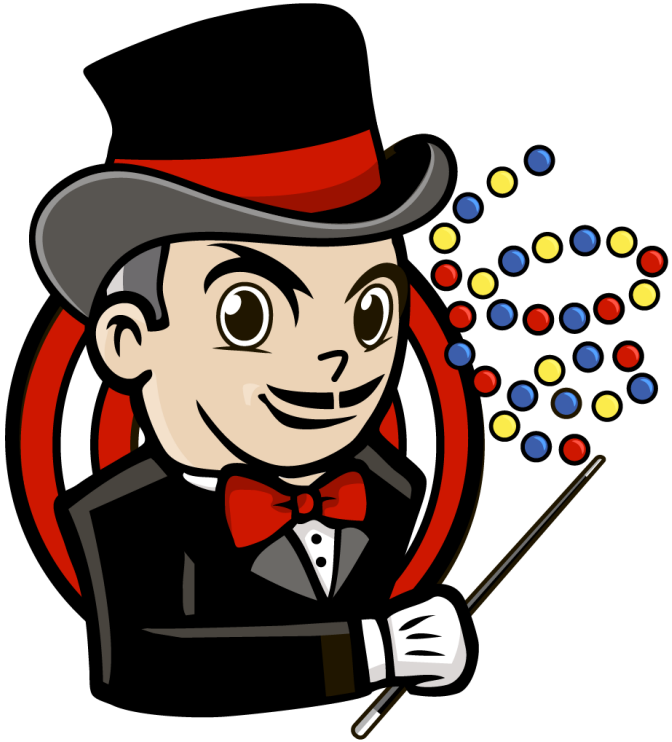
- Dynamically loaded
- You cannot `import` or otherwise “statically” refer to types from the library

Versions

- `@Library('my-shared-library') _` -> default version
- `@Library('my-shared-library@$BRANCH_NAME') _` -> $BRANCH_NAME version
- `library "my-shared-library"` -> default version
- `library "my-shared-library@$BRANCH_NAME"` -> $BRANCH_NAME version



DEMO 03



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Src/

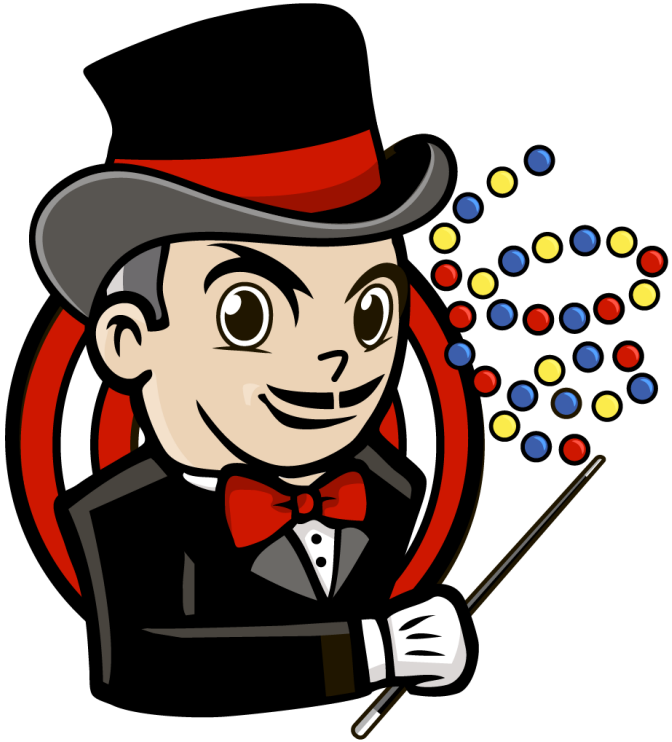
```groovy
package org.foo
class Utilities implements Serializable {
  def steps
  Utilities(steps) {this.steps = steps}
  def mvn(args) {
    steps.sh "${steps.tool 'Maven'}/bin/mvn -o ${args}"
  }
}
```

```groovy
def utils = library('utils')org.foo.Utilities
node {
  utils.new(this).mvn('clean package')
}
```

```groovy
package org.foo
def mvn(args) {
   sh "${tool 'Maven'}/bin/mvn -o ${args}"
}
```

```groovy
def utils = library('utils')org.foo.Utilities
node {
  utils.new().mvn('clean package')
}
```

DEMO 04



simple-lib

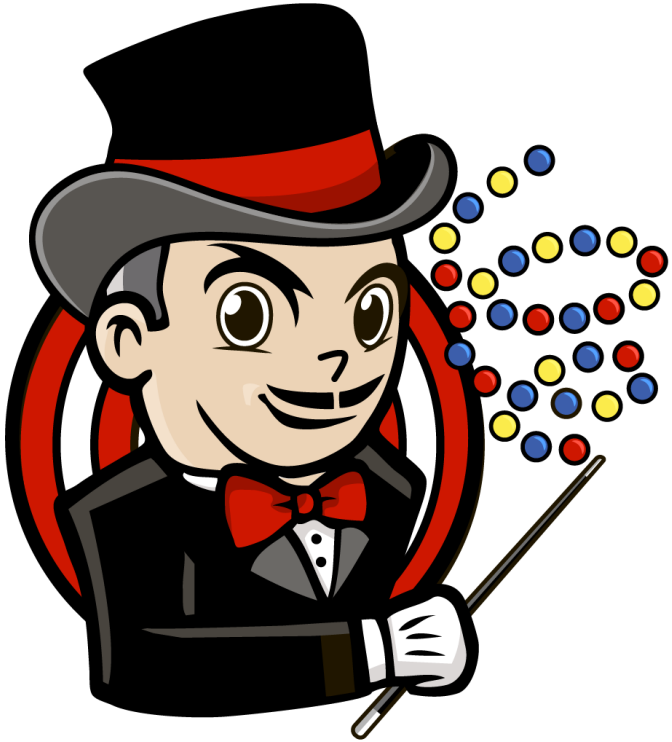
vars/

vars/log.groovy

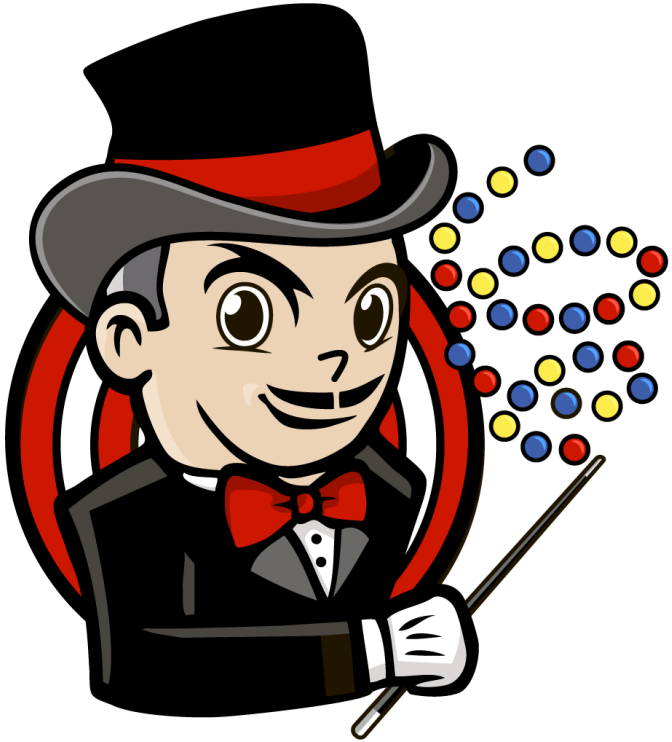
```groovy
def info(message) {
    echo "INFO: ${message}"
}

def warning(message) {
    echo "WARNING: ${message}"
}
```

Multiple functions in one file

DEMO 05



DEMO 06



temp

Conclusion

- ➔ Not a silver bullet
- ➔ Some features works strange
- ➔ Hard to debug if you do not have groovy sdk
- ➔ You can cover such libs with tests(even with integration tests)
- ➔ This is not actually a Groovy and as a result we do not have access to some cool Groovy features
- ➔ But you can inject external libs and code via `@Grab('groupId:artifactId:version')`

References

https://jenkins.io/doc/book/pipeline/shared-libraries/

https://github.com/fabric8io/fabric8-jenkinsfile-library

https://github.com/fabric8io/fabric8-pipeline-library