Cheatography

JBang Cheat Sheet

by linux_china via cheatography.com/141366/cs/30284/

Simple JBang Hello.java

```
///usr/bin/env jbang "$0" "$@" ; exit $?
class Hello {
        public static void main(S tring[] args) {
                    Sys tem.ou t.p rin tln ("Hello
World! ");
       }
}
```

Run JBang script

```
$ jbang Hello.java
$ jbang --debug Hello.java
$ chmod u+x
$ ./Hell o.java
```

Templates

```
$ jbang template list
$ jbang init --temp lat e=cli hellow orl d.java
```

ChatGPT - init script from ChatGPT

```
$ jbang init HelloCli.java "generate hello command
with picocli library"
```

You need an OPENAI_API_KEY environment variable.

Editing

$ jbang edit helloworld.java
$ jbang edit --open=code helloworld.java
$ jbang edit --open=idea helloworld.java

Assign Java version

//JAVA 8	Assigned version in Script
//JAVA 11+	Java 11 or higher
jbang --java 8 Hello.java	Assigned version from CLI
jbang jdk list --available	List available JDKs

If you don't assign Java version, and JBang will run the script with Java 17 by default.

java and javac Options

```
//JAVAC_OPTIONS -parameters
//JAVA _OP TIONS -Dnick=xxx
//JAVA _OP TIONS -Dserv er.p or t=8081 -D
spring.ap pli cat ion.na me=app1
//PREVIEW
```

Java preview

```
///usr/bin/env jbang "$0" "$@" ; exit $?
//PREVIEW
//JAVA 21
void main() {
        Sys tem.ou t.p rin tln ("Hello World");
}
```

Multiple Java source files

```
//SOURCES UserService.java
//SOURCES impl/U ser Ser vic eIm pl.java
```

Multi resource files - properties/xml etc

```
//FILES application.properties
//FILES META-I NF/ res our ces /in dex.ht ml= ind -
ex.html
//FILES META-I NF/ res our ces /jq uer y.j s=h -
ttp s:/ /co de.j qu ery.co m/j que ry- 3.6.0.m -
in.js
//FILES templa tes /He llo Wor ld.t xt.mt l=t -
emp lat es/ Hel loW orl d.t xt.mtl
```

Resource import format: `//FILES <mo unt poi nt> [= < sou rce fil e>]`

Polyglot - Kotlin

```
///usr/bin/env jbang "$0" "$@" ; exit $?
//KOTLIN 1.8.21
//DEPS org.je tbr ain s.k otl in: kot lin -bo -
m:1.8.2 1@pom
//DEPS org.je tbr ain s.k otl in: kot lin -stdlib
public fun main() {
        pri ntl n("Hello World");
}
```


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Polyglot - Groovy

```
///usr/bin/env jbang "$0" "$@" ; exit $?
//GROOVY 4.0.12
printl n("Hello World");
```

Polyglot - JShell

```
///usr/bin/env jbang "$0" "$@" ; exit $?
//DEPS net.da taf ake r:d ata fak er: 1.9.0
import net.da taf ake r.F aker;
Faker faker = new Faker();
```

$ jbang demo.jsh
$ jbang --interactive demo.jsh

JBang native

```
$ jbang --native Hello.java
// https: //g ith ub.c om /li nux -ch ina /jb -
ang -sp rin g-n ative
// https: //g ith ub.c om /Go odf orG od/ gra alv -
m-hint
```

Dependencies

```
//DEPS systems.manifold:manifold-all:2023.1.10
//DEPS org.pr oje ctl omb ok: lom bok :1.1 8.28
//DEPS org.sl f4j :sl f4j -si mpl e:2.0.7
//DEPS libs/l oca l.jar
//DEPS eu.mav eni ver se.m av en.p lu gin s:t ool -
box :0.1.9 :cl i@f atjar
```

fatjar: all its dependencies included and thus not require fetching declared dependencies.

Managed dependencies by BOM - Spring Boot

```
//DEPS org.springframework.boot:spring-boot-
dependencies:2.7.11@pom
//DEPS org.sp rin gfr ame wor k.b oot :sp rin g-b -
oot -st arter
```

Managed dependencies by BOM - Quarkus

```
//DEPS io.quarkus:quarkus-bom:2.9.2.Final@pom
//DEPS io.qua rku s:q uar kus -re steasy
```

Repositories

```
//REPOS central,spring-
release=https://repo.spring.io/release
//REPOS centra l,s pri ng- mil est one =ht -
tps :// rep o.s pri ng.i o/ mil estone
```

Well-known reposi tories

```
* central - https: //r epo 1.m ave n.o rg/ maven2/
* google - https: //m ave n.g oog le.com/
* jitpack - https: //j itp ack.io/
```

Aliases

```
$ jbang alias add --name hello
https://github.com/jbangdev/jbang-
examples/blob/HEAD/examples/helloworld.java
$ jbang hello
$ jbang alias list
$ jbang alias list --show -origin
```

Catalogs - jbang-catalog.json

```
{
    " ali ase s": {
        " hel lo": {
            " scr ipt -re f": " hel lo.j av a",
            " des cri pti on": " Script that says
hello back for each argume nt"
        }
}
```

JSON Schema for jbang-catalog.json https://github.com/jbangdev/jbang-idea/blob/main/src/main/resources/jbang-catalog-schema.json

Catalogs - local jbang-catalogs.json

1. jbang-catalog.json in current directory
2. jbang-catalog.json in parent directory util the root diretory
3. $HOME/.jbang/jbang-catalog.json
4. JBangHub: https://github.com/jbanghub

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Catalogs - implicit catalog from GitHub

jbang hello@acme	hello alias in acme/jbang-catalog/jbang-catalog.json
jbang hello@acme/mycatalog	hello alias in acme/mycatalog/jbang-catalog.json
jbang hello@acme/mycatalog/dev	hello alias in acme/mycatalog/jbang-catalog.json in dev branch
jbang hello@acme~experimental	hello alias in acme/jbang-catalog/experimental/jbang-catalog.json
jbang hello@example.com	hello alias found in https://example.com/jbang-catalog.json

Catalogs - management

```
$ jbang catalog add --name acme acme
$ jbang catalog add --name mycatalog acme/m yca -
talog
$ jbang catalog list
```

Tips

jbang --fresh	Use none-cached resources
jbang info tools Hello.java	Prints a json description of JBang script

Apps - setup jbang to put scripts into your PATH

```
$ jbang app install <scriptRef>
$ $ jbang app install --name app1 <sc rip tRe f>
$ jbang app list
$ jbang app uninstall <na me>
```

build.java

```
///usr/bin/env jbang "$0" "$@" ; exit $?
//JAVA 17
//DEPS info.p ico cli :pi coc li: 4.7.3
//SOURCES src
//FILES resources
```

JBang export - generate jar or native binary

jbang export fatjar	Exports an executable fat jar with all dependencies
jbang export portable	Exports jar together with dependencies in pom.xml
jbang export native	Exports native executable
jbang export mavenrepo	Exports directory that can be used to publish as a maven repository
jbang export jlink	Export app with Java runtime embedded

JBang with ChatGPT

```
export OPENAI_API_KEY=sk-xxxxxxx-x-xxxxxx
jbang init gh.java " connect to github an fetch
all reposi tories under jbangdev and collect how
many stars they have"
```

JBang environment variables

JBANG_DEFAULT_JAVA_VERSION	11
JBANG_DOWNLOAD_SOURCES	true
JBANG_EDITOR	Code editor, such as zed, code

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