# GraalVM™ Quick Reference

Tested with GraalVM 20.3.0

## RUN JAVA APPLICATIONS

Compile a Java class:
```
javac MyApp.java
```

Run the application from a JAR file:
```
java -jar  MyApp.jar
```

Specify the class path for the app:
```
java -cp target/myapp.jar
com.mycompany.app.MyApp
```

Run the JIT compiler as JAR or native library (default):
```
-XX:±UseJVMCINativeLibrary
```

Select the GraalVM compiler configuration:
```
-Dgraal.CompilerConfiguration=
enterprise|community|economy
```

Print the details for the JIT compiled code:
```
-Dgraal.PrintCompilation=true
```

Produce the diagnostic data for the compilation:
```
-Dgraal.Dump
```

Load a javaagent:
```
-javaagent:<jarpath>[=<options>]
-agentlib:<libname>[=<options>]
```

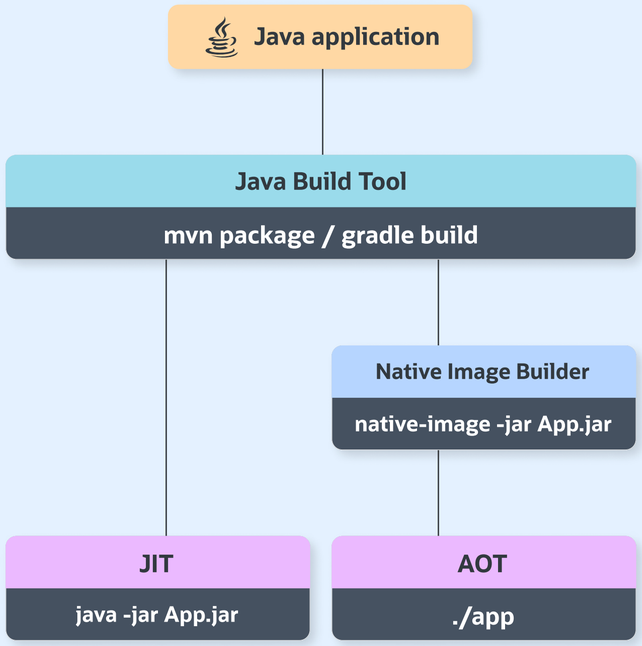
## COMPILE TO NATIVE EXECUTABLES

Install the native image builder from a local file:
```
gu install -L native-image.jar
```

Native Image command syntax:
```
native-image [options] MyClass
```

Build a native image of a JAR file:
```
native-image -jar MyApp.jar
```

Run a native image:
```
./myapp
```




Build a shared library:
```
--shared
```

Build a statically linked native image:
```
--static --libc=glibc|musl
```

Include a language runtime in the native image:
```
--language:js|python|ruby|llvm|wasm
```

Use profile-guided optimizations:
```
native-image --pgo-instrument MyApp
./myapp  #and apply load
native-image --pgo profile.iprof MyApp
```

Attach a debugger:
```
--debug-attach=[port]
```

Trace classes initialization:
```
--trace-class-initialization
```

List all image build options for experts:
```
--expert-options-all
```

## ENABLE POLYGLOT PROGRAMMING

Run a Node.js application:
```
node myApp.js
```

Run a JavaScript, R, Ruby, Python, LLVM application:
```
js myApp.js
graalpython myApp.py
ruby myApp.rb
R myApp.r
lli myApp
```

Run other languages in a Java application:
```
org.graalvm.polyglot
  .Context
   .createContext()
   .eval("languageId", "code");
```

Enable polyglot capabilities for an application:
```
--polyglot --jvm
```

Limit resources for the application:
```
--sandbox.MaxCPUTime=<ms>
--sandbox.MaxStatements=N
```

Debug the application:
```
--inspect[=[host:]<port number>]
--inspect-brk
```

Profile the application:
```
--cpusampler
--cputracer
--memtracer
```


More info at: graalvm.org