



PROGRAMMING

# HOW TO: INSTALL & RUN KOTLIN IN UBUNTU



ADMIN MAY 28, 2019

## OVERVIEW

Contains instructions on how to install **Kotlin** in an Ubuntu operating system. With a sample code on how to compile and execute a simple program.

## PREREQUISITES

- Ubuntu 18 or higher
- Java is installed
  - \$ sudo apt update
  - \$ sudo apt install default-jdk

## INSTALL VIA SDKMAN

01. Open a terminal and install applications needed by SDKMAN

**SDKMAN!** is a tool for managing parallel versions of multiple Software Development Kits on most Unix based systems

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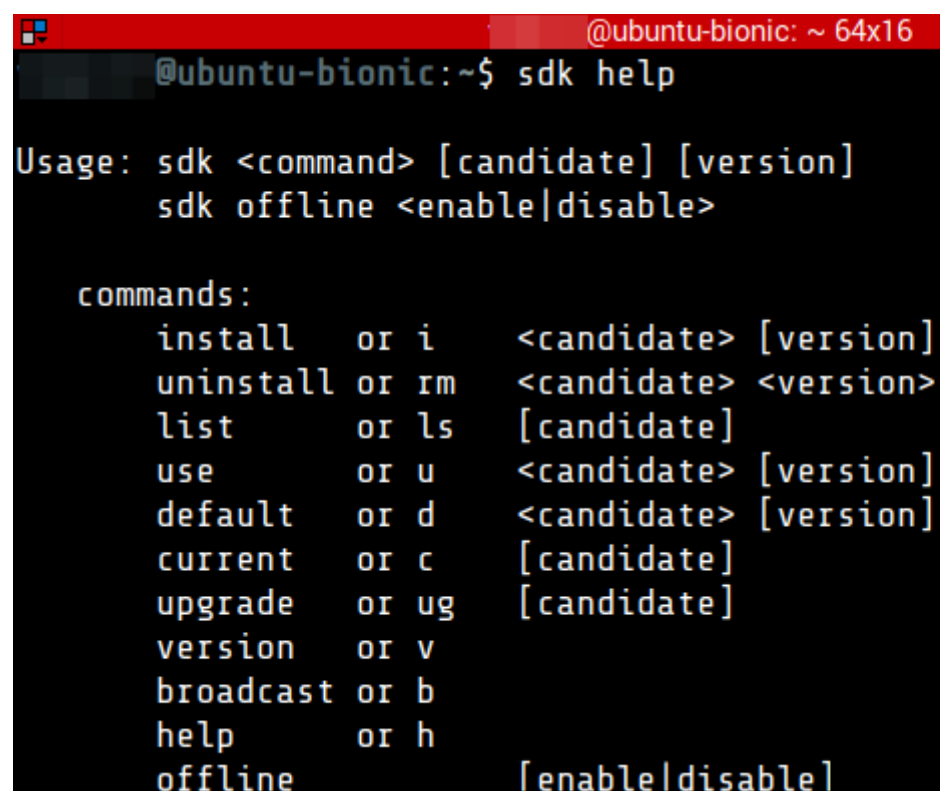
```
1 $ sudo apt update
2
3 $ sudo apt install unzip
4
5 $ sudo apt install zip
```

02. and install SDKMAN, which will be used to install Kotlin.

```
1 $ cd ~
2
3 $ curl -s https://get.sdkman.io | bash
```

03. Exit from the terminal and open a new one. Test if SDKMAN is installed correctly. Help instructions should be shown.

```
1 $ sdk help
```



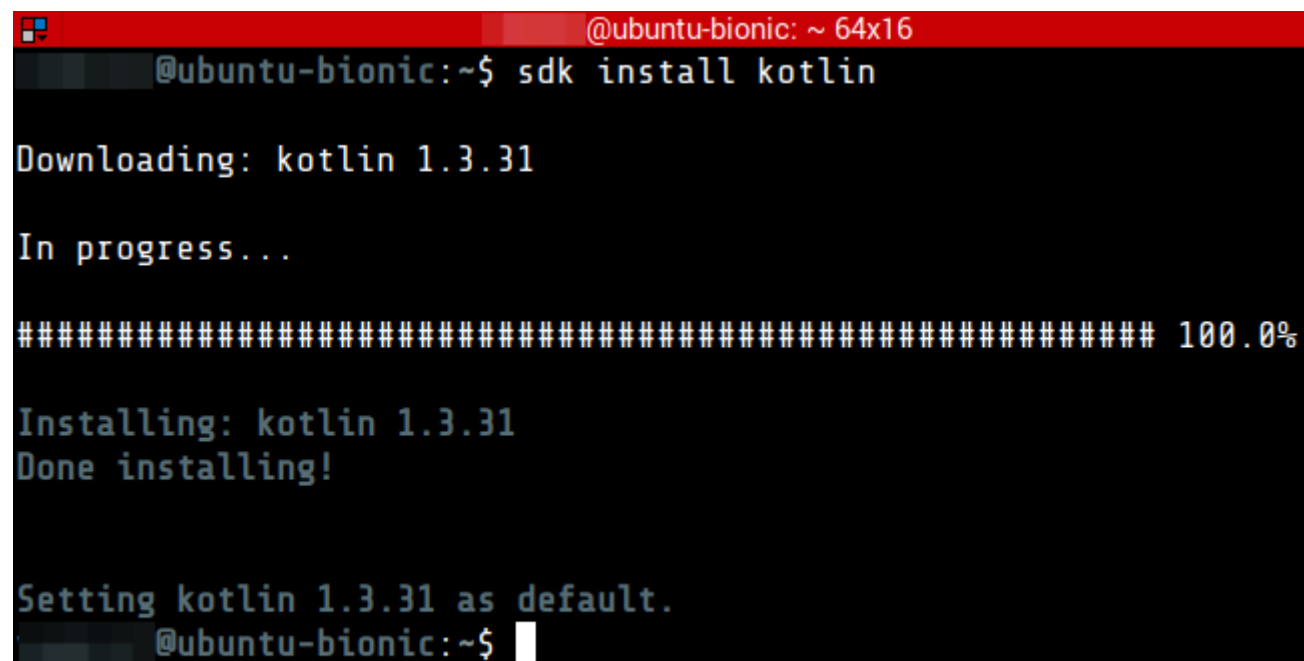
```
@ubuntu-bionic:~$ sdk help

Usage: sdk <command> [candidate] [version]
       sdk offline <enable|disable>

commands:
  install    or i    <candidate> [version]
  uninstall  or rm    <candidate> <version>
  list       or ls    [candidate]
  use        or u     <candidate> [version]
  default    or d     <candidate> [version]
  current    or c     [candidate]
  upgrade    or ug    [candidate]
  version    or v
  broadcast  or b
  help       or h
  offline    [enable|disable]
```

04. Install Kotlin

```
1 $ sdk install kotlin
```



```
@ubuntu-bionic:~$ sdk install kotlin

Downloading: kotlin 1.3.31

In progress...

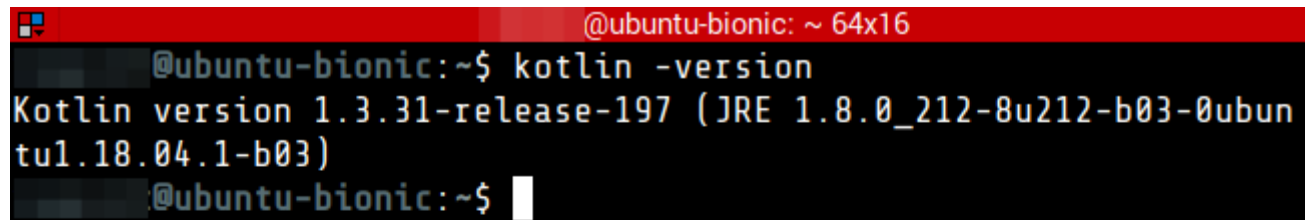
##### 100.0%

Installing: kotlin 1.3.31
Done installing!

Setting kotlin 1.3.31 as default.
@ubuntu-bionic:~$
```

05. Verify that Kotlin is installed. The following should output the version of Kotlin installed.

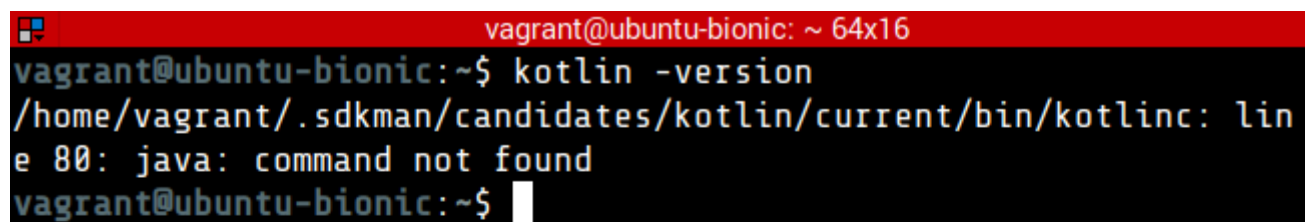
```
1 | $ kotlin -version
```

A terminal window with a red title bar labeled '@ubuntu-bionic: ~ 64x16'. The prompt is '@ubuntu-bionic:~\$'. The command 'kotlin -version' has been executed, resulting in the output: 'Kotlin version 1.3.31-release-197 (JRE 1.8.0\_212-8u212-b03-0ubuntu1.18.04.1-b03)'. The prompt is now '@ubuntu-bionic:~\$' with a cursor.

```
@ubuntu-bionic:~$ kotlin -version
Kotlin version 1.3.31-release-197 (JRE 1.8.0_212-8u212-b03-0ubuntu1.18.04.1-b03)
@ubuntu-bionic:~$
```

`$ kotlin -help`

If an error saying java command is not found, it means that Java is not installed.

A terminal window with a red title bar labeled 'vagrant@ubuntu-bionic: ~ 64x16'. The prompt is 'vagrant@ubuntu-bionic:~\$'. The command 'kotlin -version' has been executed, resulting in the output: '/home/vagrant/.sdkman/candidates/kotlin/current/bin/kotlinc: line 80: java: command not found'. The prompt is now 'vagrant@ubuntu-bionic:~\$' with a cursor.

```
vagrant@ubuntu-bionic:~$ kotlin -version
/home/vagrant/.sdkman/candidates/kotlin/current/bin/kotlinc: line 80: java: command not found
vagrant@ubuntu-bionic:~$
```

## INSTALL VIA SNAP

01. Install Kotlin

```
1 | $ sudo snap install --classic kotlin
```

```
@ubuntu-bionic: ~ 64x16
@ubuntu-bionic:~$ sudo snap install --classic kotlin
2019-05-24T13:30:57Z INFO Waiting for restart...
kotlin 1.3.31 from 'jetbrains' installed
@ubuntu-bionic:~$
```

02. Verify that Kotlin is installed. The following should output the version of Kotlin installed.

```
1 | $ kotlin -version

@ubuntu-bionic: ~ 64x16
@ubuntu-bionic:~$ kotlin -version
Kotlin version 1.3.31-release-197 (JRE 1.8.0_191-8u191-b12-2ubuntu0.16.04.1-b12)
@ubuntu-bionic:~$
```

# RUNNING KOTLIN

Run a Kotlin program that shows a message to the console/output.

01. Create a file named hello-geek.kt

```
1 | $ cd
2 |
3 | $ nano hello-geek.kt
```

Set the content as follows

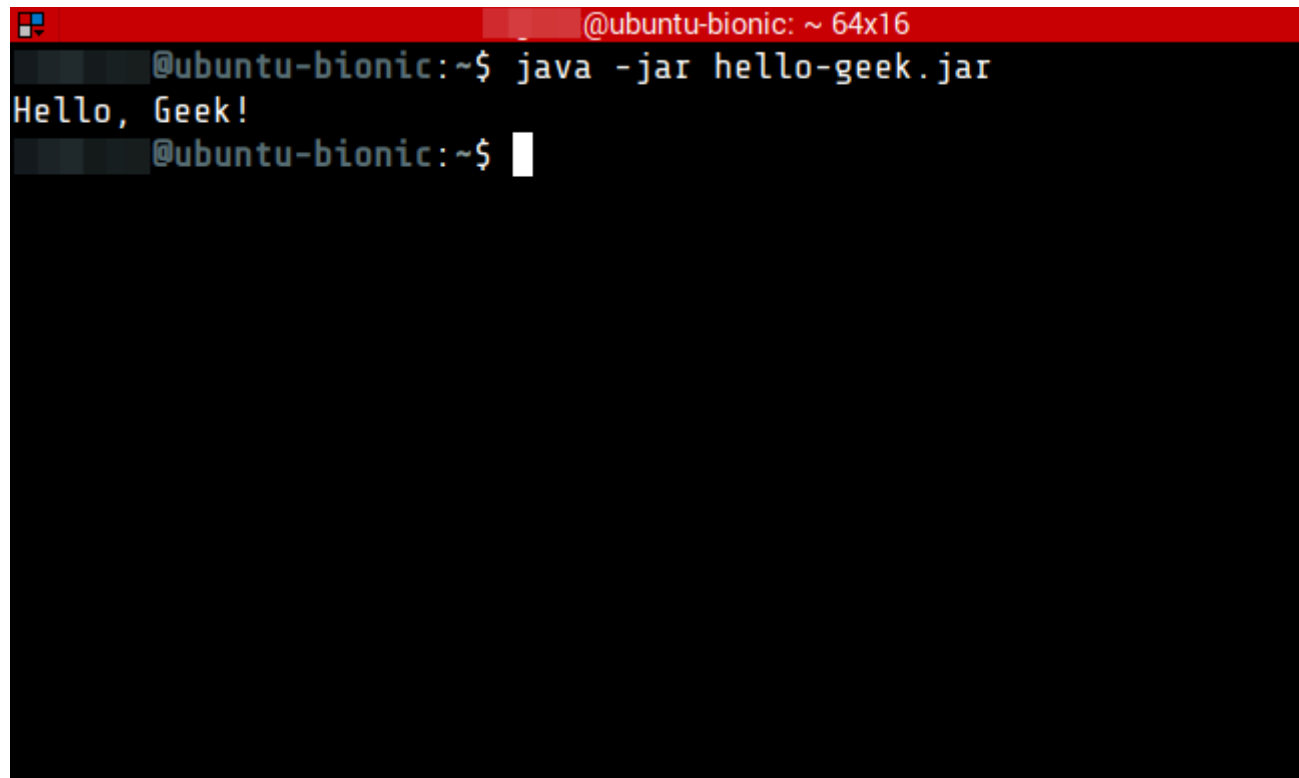
```
1 | fun main(args: Array<String>) {
2 |
3 |     println("Hello, Geek!")
4 |
5 | }
```

02. Compile the application using Kotlin. This creates a JAR (Java Archive) file

```
1 | $ kotlinc hello-geek.kt -include-runtime -d hello-geek.jar
```

03. Run the application using Java

```
1 | $ java -jar hello-geek.jar
```

A terminal window with a red title bar that reads "@ubuntu-bionic: ~ 64x16". The terminal shows the command "java -jar hello-geek.jar" being executed, followed by the output "Hello, Geek!". The prompt "@ubuntu-bionic:~\$" is visible on the next line.

```
@ubuntu-bionic:~$ java -jar hello-geek.jar
Hello, Geek!
@ubuntu-bionic:~$
```

## SUMMARY

“

“Kotlin is a cross-platform, statically typed, general-purpose programming language with type inference. Kotlin is designed to interoperate fully with Java, and the JVM version of its standard library depends on the Java Class Library,[2] but type inference allows its syntax to be more concise”

— Wikipedia.org

”

Kotlin is good language. If you are using the JVM and you want to use a different language aside from Java, this is a good option.

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