Java Hello World in Linux

Contents

Time Required: 60 minutes

This tutorial shows you how to compile a Java program on Kali Linux using an opensource JDK compiler. These directions can be used on any Debian flavored Linux.

NOTE: Commands, filenames, and directories are case sensitive.

Common Linux Commands

su – (change logon to root)

sudo (runs a command as root)

ip a (ip address)

ls (lists files or directories)

cd (change directories)

mkdir (makes directories)

rmdir (removes directories)

cp (copy file)

rm (delete file)

chmod (modify file and directory security)

grep (search text file for characters)

passwd (create or change password)

Setup the Development Environment

NOTE: If you already have Kali Linux setup, go ahead and use that.

Kali Linux is available in a prebuilt virtual machine.

1. If you do not have VirtualBox on your computer, go to www.virtualbox.org.
2. Download and install the version for your operating system.
3. Go to https://www.kali.org/get-kali/#kali-virtual-machines
4. Download the 64-bit VirtualBox file. This can take some time as the file is 3 GB.
5. Go to https://www.7-zip.org/download.html Download and install 7-zip for x64it Windows.
6. Right click the Kali Linux file you downloaded → 7-zip → Extract here.
7. Double Click the file you extracted. It will ask to be imported into VirtualBox.
8. Start Kali Linux.
9. The username and password is **kali**

Install JDK

The Java JRE (Java Runtime Environment) is already installed. This allows us to run Java programs. We need to install the JDK to create programs.

1. Open a terminal. Type in the following.

```
# Update Kali Linux
sudo apt update
sudo apt upgrade

# What java version do you have? It is 23 at the time of this tutorial
java -version

# Install the JDK of whatever version your JRE is
sudo apt install openjdk-23-jdk
```

2. Accept and install.

Let's confirm the installation.

```
javac –version
```

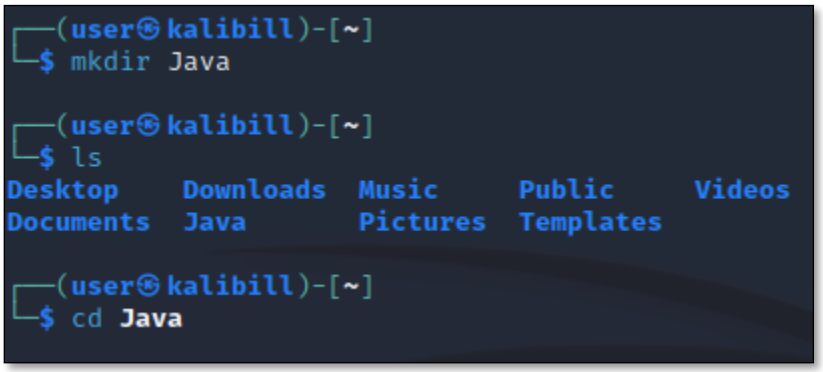
Example run.

Hello World

1. Create a directory named Java to hold Java programs and your main HelloWorld program.

```
mkdir java
```

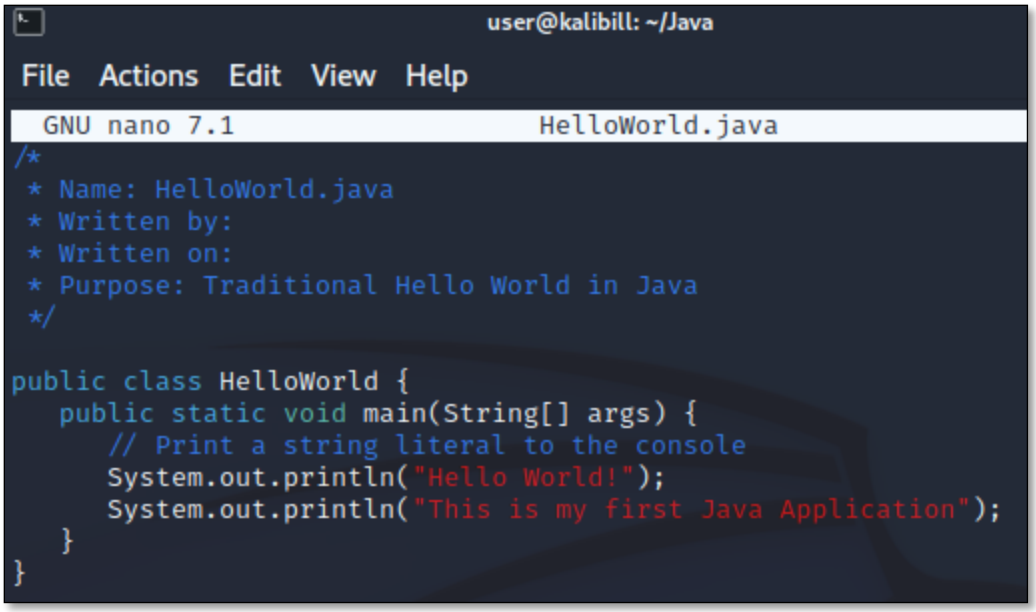
2. Type **ls** to confirm. You should see a **Java** folder. Use the cd command to change directories.



Write the Code

We will be writing the code in a command line editor, nano.

1. At the terminal: **nano HelloWorld.java**
2. Enter the following code.



3. Press **CTRL S** to Save the file.
4. Press **CTRL X** to **Exit**.
5. The Linux cat command is used to take a quick look at a text file. Type **cat HelloWorld.java** to confirm the file.

Compile and Run the Program

1. To compile the program: run the following command. If there are any errors, check your program.

```
┌──(user㉿kalibill)-[~/Java]
└─$ javac HelloWorld.java
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
```

2. To execute your program: run the following command.

```
┌──(user㉿kalibill)-[~/Java]
└─$ java HelloWorld
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
Hello World!
This is my first Java Application
```

Congratulations! You created your first Java program in Linux!

Assignment Submission

Attach screenshot files of the following in the Blackboard assignment submission.

1. A screenshot of your code in nano.
2. A screenshot of your program running.