

# Intro to App Development on Android

@ T.Hacks 2016

Marc Lijour

Workshop - October 22, 2016

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- 2 Setting Up your Dev Environment
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# Presenter: Marc Lijour

Helping businesses and countries digitize



- Director @ Savoir-faire Linux
- Ryerson Alumnus: Computer Science undergrad, MBA
- Using Free Software since 1999
- Board Officer @ ICTC, Director @ Prepr



# Workshop Participants

Present Yourselfs...

- Studies, Majors
- Businesses & Hobbies
- What you're in for
- What other mobile development platforms have you looked at?

# Introducing Android

## Who is using Android?

- Android is an Open Source Operating System maintained by Google
- Based on Linux and Java
- Large number of devices running Android
- $\neq$  iOS: a closed platform, made for simplicity and elegance
- Android also runs on watches, autos...

# Introducing Android

## Mobile OS Market Share

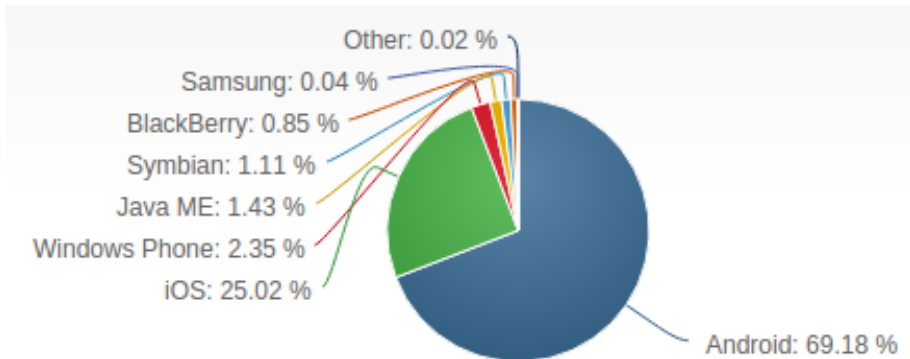


Figure: NetmarketShare (September 2016)

# Introducing Android

Java code everywhere (Android & Beyond)

- Study using data from the job site Indeed
- What languages do professionals use? Which ones are most in demand?
- Also see the TIOBE Index
- and the IEEE ranking (July 2016) (try all rankings)

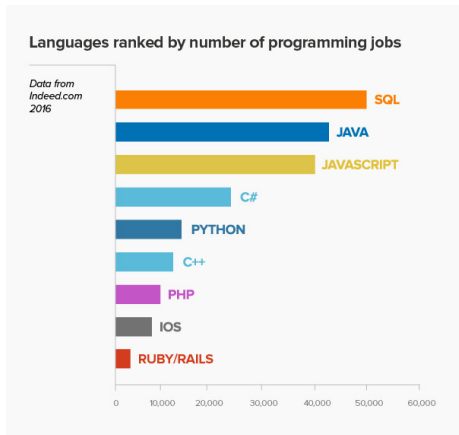


Figure: Coding Dojo (Jan 2016)

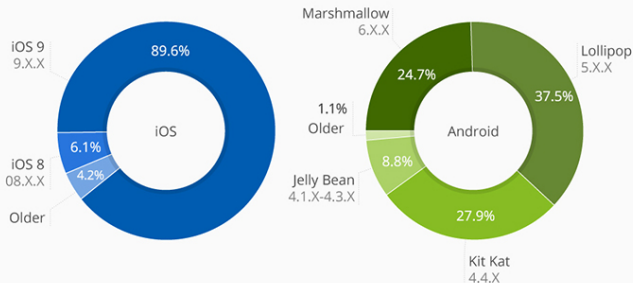


# Introducing Android

A moving target for developers

## Mobile OS Fragmentation

Adoption of the latest iOS and Android versions in June 2016



@StatistaCharts

Source: Mixpanel

statista

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# Computer Basics

## Concepts to keep in mind

- OS: operating system (Windows, Mac, Linux...)
- IDE: Integrated Development Environment (e.g. Android Studio, Eclipse)
- Console (to write) vs. IDE (to click): use the best tool for the job
- Server-side: your Android app might just be a client talking to a server

# Installing Android Studio on Linux

The way to go -e.g. on a Ubuntu-based distro

Install Oracle Java (the last step is optional):

```
$ sudo add-apt-repository ppa:webupd8team/java
$ sudo apt-get update
$ sudo apt-get install oracle-java8-installer
$ sudo apt-get install oracle-java8-set-default
```

run this to install Android Studio:

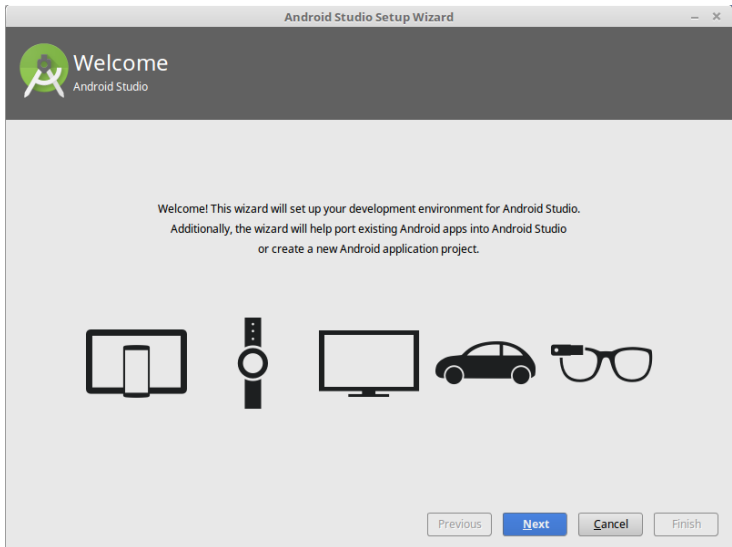
```
$ sudo add-apt-repository ppa:paolorotolo/android-studio
$ sudo apt-get update
$ sudo apt-get install android-studio
```

Voilà!

Executable should appear in the menus, or find it at  
`/opt/android-studio/bin/studio.sh`

# Installing Android Studio on Linux

Follow the Wizard

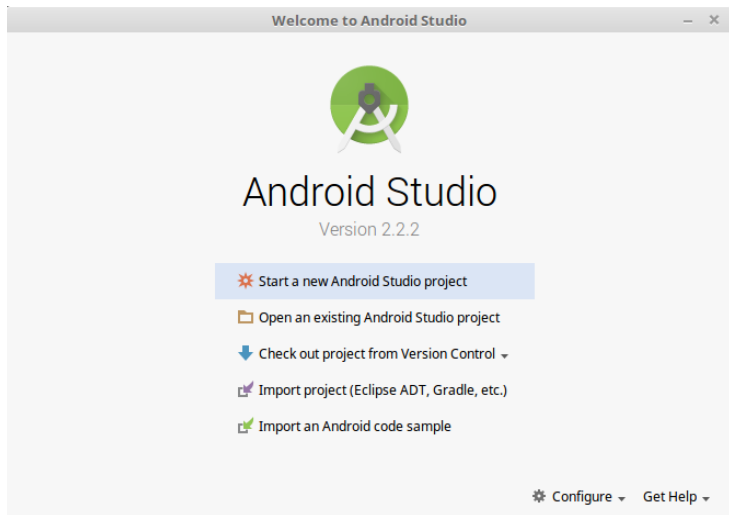


# Installing Android Studio on Any Desktop

Follow instructions at

<https://developer.android.com/studio/install.html>

# Starting Development



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# How do you Learn a Language?

Building your dream apps on Android

- Babies didn't learn at school!
- Read code, then read more code, then read more
- Write code, then write some more, then go and write more...
- Practice leads to perfection

# Resources to Learn Android

Excellent free books and videos out there

- <https://developer.android.com/training/index.html>
- Google course on Udacity (60 hours): <https://www.udacity.com/course/developing-android-apps--ud853>
- Next steps is Nanodegree (not free: US\$250/month)
- Safari Books Online from O'Reilly (free with a Toronto Public Library card)
- Don't forget to learn Java! See this great reference: <http://www.greenteapress.com/thinkajava/thinkajava.pdf>

# Final Words of Advice

To get really good at anything in life

- Set high expectations for yourself
- Love what you do
- Never stop until you get there

# The End

Happy programming for Android!