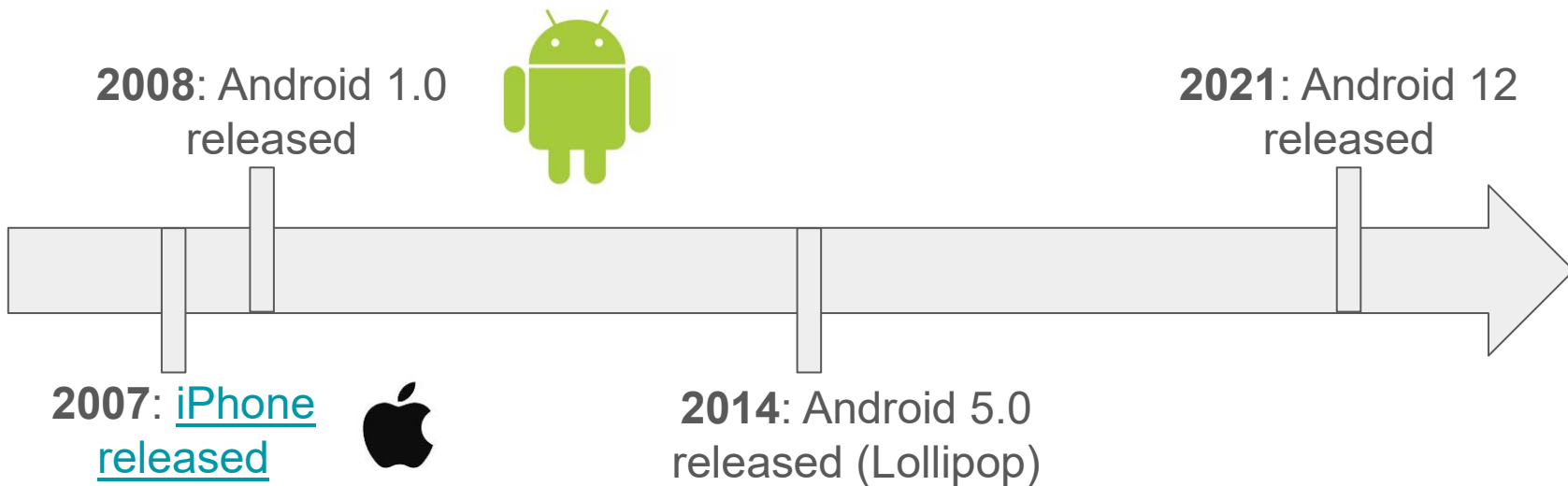


What is Android?

A mobile operating system maintained by Google:

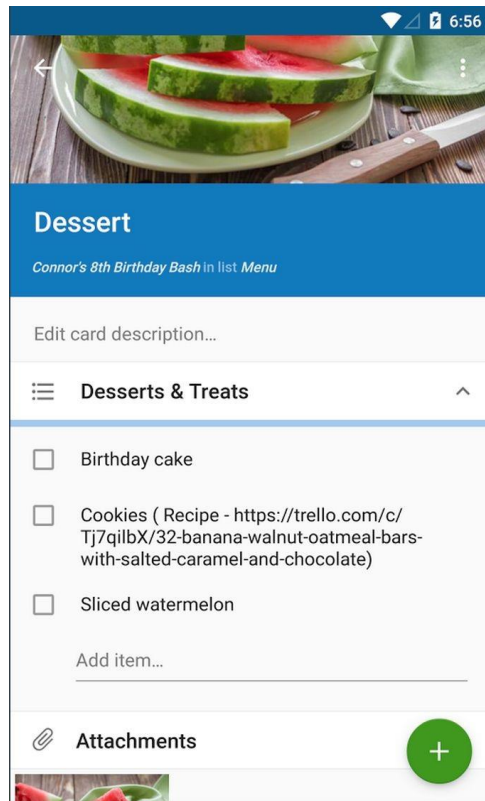
- Open source, code is freely accessible
- Operating system based on Linux, apps written in Java/Kotlin
- More than 2 billion MAUs (monthly active users)
- Google Play Store contains 2.9 million apps

Android: the most popular OS in the world



Android: a changing ecosystem

- **2014:** Android 5.0 introduced major changes:
 - Material Design: guidance on color schemes, iconography, animations, etc
 - ART: improved runtime system, e.g. garbage collection and ahead of time (AOT) compilation
- Flagship phones introduced in recent years (Samsung S21, Google Pixels)



A more open ecosystem

- Android TV
- Android Auto
- Wear OS
- Facebook Portal





Why you should care

- Familiarity with Android allows you to compare and contrast approaches of various platforms

- Free/cheap dev tools, easier to ship
- Many job opportunities, and more expected in the future

Is Native Development Still Relevant???

- Cross platform options: React Native, Flutter, Mobile Web
- Native apps still offer the “premium” experience

- At least for the next 5-10 years, native Android + iOS will remain relevant and in demand

Do I need an Android device?

- No, the Android emulator should suffice
- Pros/cons of a physical Android device:
 - Easier to test certain features, experiment with animations
 - Easier to show off what you build
 - Need to plug phone into computer
- Fire HD 8" Tablet [is \\$70](#)

How to develop Android apps?

- Java or Kotlin?
 - Both run on the JVM, Kotlin is more modern and recommended for all new apps
- [Kotlin](#): statically typed language, interoperates with Java

Java

```
String first = "Joe";  
String last = "Smith";  
last += "s";  
String text = "Mr. " +  
last;
```

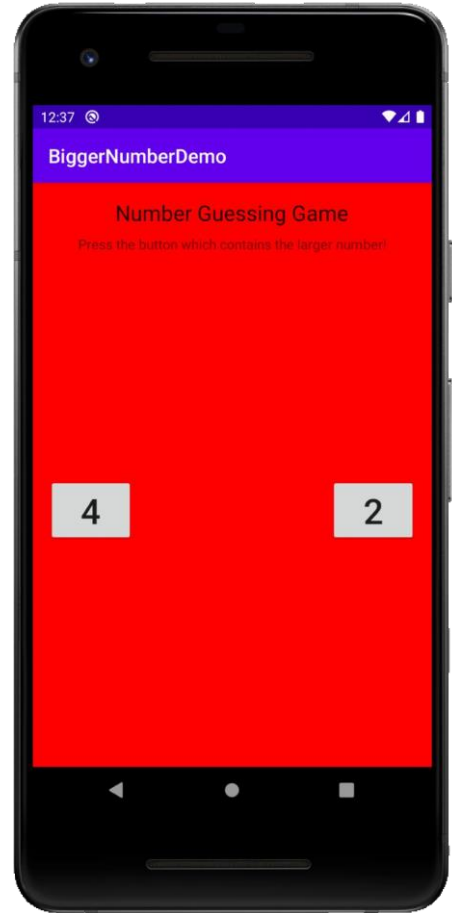
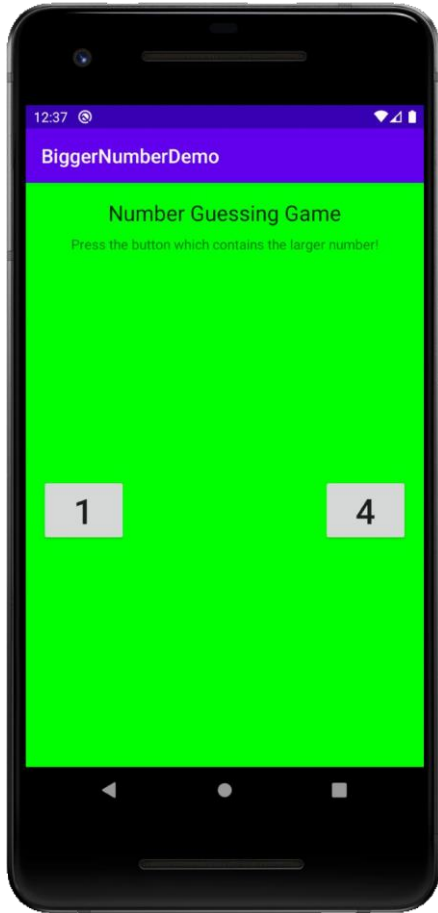
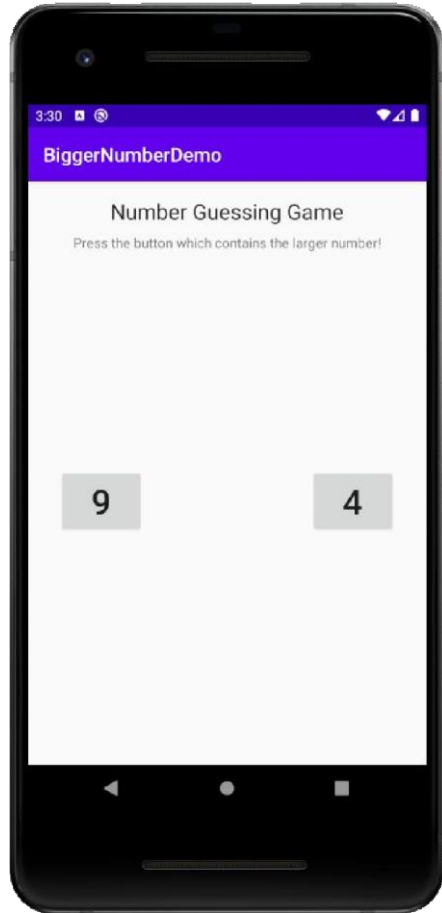
Kotlin

```
val first: String =  
"Joe" var last =  
"Smith" last +=  
"s" val text =  
"Mr. $last"
```

Let's do a demo!

- Kotlin logic for the Bigger Number game

“Bigger number” game (from [Marty's class](#))



Prep for next week

- Go through the [Android Studio video](#)
 - Have Android Studio and an emulator setup
- Kotlin
 - Kotlin in 12 Minutes [video](#)
 - (Optional) Read more about Kotlin: <https://kotlinlang.org/docs/reference>

