What’s New on Android

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Pardon for our selfies throughout the slides 😊
• First Google Authorized Training Partner (ATP) Program in Indonesia

• Provide courses leading to Google Certifications, such as the new Associate Android Certification *soon
Jokowi’s SV Visit: Google to help train 100k Indonesian mobile developers by 2020
Mobile first to AI first
2 Billion
Building for Billions

Useful offline state
<10MB APK size
Better battery and memory performance

What Google aims for
#IO17: low-spec device initiatives
Android Go

Data Management & Savings
#IO17 : Android Go
Optimized Apps
#IO17 : Kotlin
#IO17: Android Studio 3.0 Canary
#IO17 : More on Instant Apps

Android Instant Apps
### Android Vitals Overview

#### Application Not Responding (ANR) rate

Percentage of users who experienced Application Not Responding (ANRs) when your app was in the foreground on any particular day. Learn more.

<table>
<thead>
<tr>
<th>BY APP VERSION</th>
<th>BY DEVICE</th>
<th>BY ANDROID VERSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>App version</td>
<td>Daily sessions</td>
<td>ANR-free sessions</td>
</tr>
<tr>
<td>1.4 (5000007800) Production</td>
<td>-1k</td>
<td>96.4%</td>
</tr>
<tr>
<td>1.3 (40000099900)</td>
<td>3.5%</td>
<td>95.4%</td>
</tr>
<tr>
<td>1.211 (2000001900)</td>
<td>4.13%</td>
<td>95.1%</td>
</tr>
<tr>
<td>1.101 (2000099900)</td>
<td>1.56%</td>
<td>95.1%</td>
</tr>
</tbody>
</table>
#IO17 : Vitals
#IO17 : Vitals

```
/data/anr/traces.txt

"main" prio=5 tid=1 Blocked
...
    at com.test.google.play.TestApp.freezeUiDeadlock(TestApp.java:37)
    - waiting to lock 0x06832041 (a java.lang.Object) held by thread 15
    - locked 0x0ceeb9e6 (a java.lang.Object)

"AsyncTask #1" prio=5 tid=15 Blocked
...
    at com.test.google.play.TestApp$GetLocksInOrder.doInBackground(TestApp.java:49)
    - waiting to lock 0x0ceeb9e6 (a java.lang.Object) held by thread 1
    - locked 0x06832041 (a java.lang.Object)
```
#IO17: Fluid Multiwindow PIP Context-based
Room Database

Data Access Objects

Entities

Get DAO
Get Entities from db
Persist changes back to db
get / set field values

Rest of The App

Android
Architecture
Components
Lifecycle
ViewModel
Room
A more convenient and consistent user experience for notification controls

- The app defines its channels
- Android takes care of the rest
#IO17: Notifications
#IO17: Notifications
Artificial Intelligence (AI)

Image Recognition in Google Lens, Google Home & Assistant, Tensor Flow Lite and more.
TensorFlow Mobile

Mobile platform support
- Android
- iOS
- RasPi

Optimizations
- Quantization
- and more
VR & AR

Daydream
https://events.google.com/io/io/recap
http://g.co/io/io/videos
Menjadi Android Developer Expert
Ahmad Imaduddin dan Sidiq Permata
Thank you!

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