

Mentor Academy

Android Application Development course



Before we start

How the first Home assignment was?



First assignment

Good parts

- + Clean and understandable code.
- + Plenty of comments.
- + Some of you were ready on Friday morning.
- + Direct links for usability (android:autoLink).



First assignment

Good parts

- + The 'About Us' button is in the Menu
- + Two main-buttons home view.
- + No need for the Calculate button.
- + More options for every menu, more fun.
- + Animations included.



First assignment

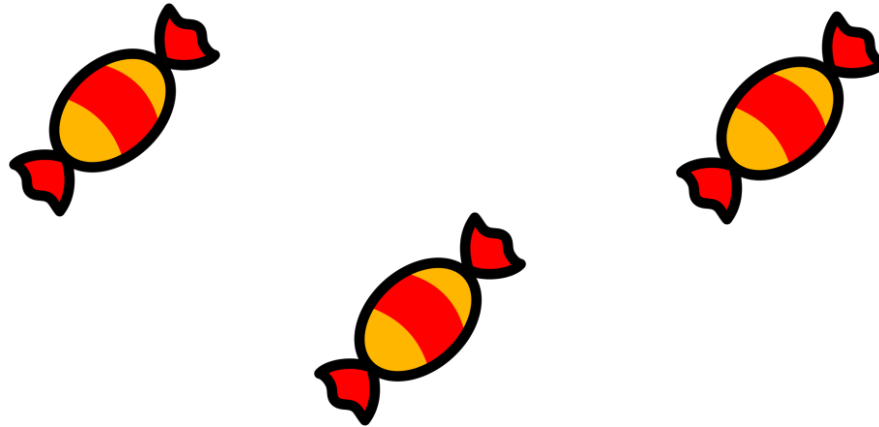
Bad parts

- Crash when creating a new activity.
- Use editText instead of textView.
- Careful when using the finish() method.
- Too much efforts in supporting different screen sizes.



Before we start

What did we talked about last time?



Before we start

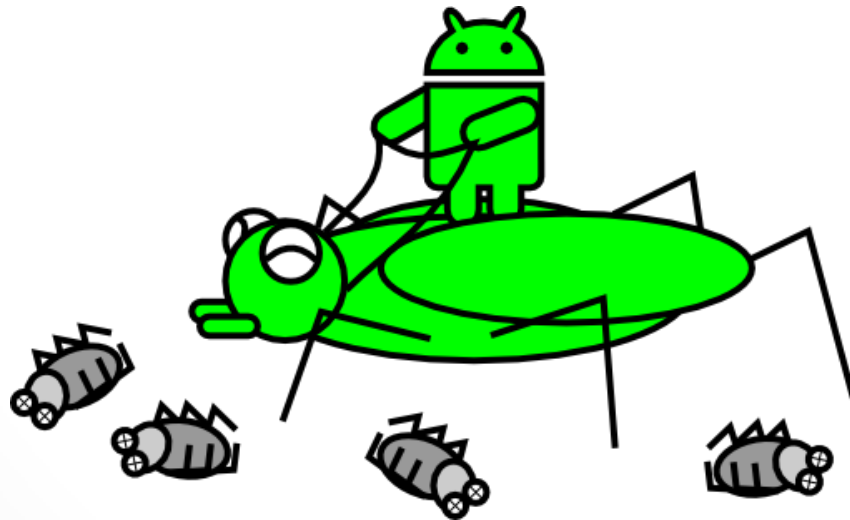
What did we talked about last time?

- What are and Android app's main components.
- What is the Android manifest and where are the app's resources located.
- How to manage the Activity Lifecycle.



Today's lesson

3. Debugging Android Apps, Logging and DDMS.



Debugging in general

Debugging is a methodical process of finding and reducing the number of bugs, or defects, in a computer program or a piece of electronic hardware, thus making it behave as expected.



Debugging in general

Grace Murray Hopper



- popularized the idea of machine-independent programming languages, which led to the development of COBOL
- credited with popularizing the term "debugging"



9/9

0800 Antam started

1000 " stopped - antam ✓

1300 (032) MP-MC 1.982647000 9.037847025
2.130476415 9.037846995 correct
(033) PRO 2 2.130476415 4.615925059(-2)
correct 2.130676415

Relays 6-2 in 033 failed special speed test
in relay " 11.00 test.

Relays changed

1100 Started Cosine Tapc (Sine check)

1525 Started Multy Adder Test.

1545

Relay #70 Panel F
(moth) in relay.

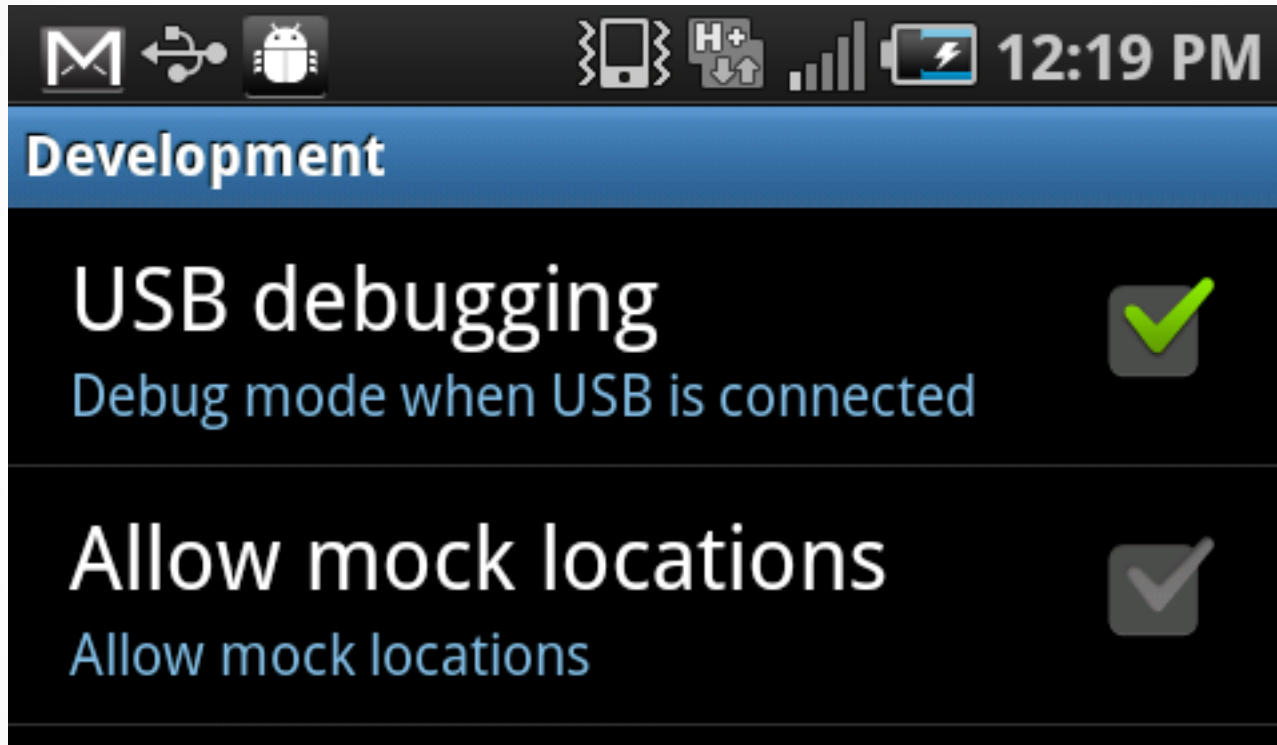
First actual case of bug being found.

1630 Antam started.

1700 closed down.

Relay 337
2145
Relay 337

Debugging Android app




Debugging in Android Studio

While debugging in Android Studio you can:

- View the system log.
- Set breakpoints in your code.
- Examine variables and evaluate expressions at run time.
- Run the debugging tools from the Android SDK.
- Capture screenshots and videos of your app.



Debugging in Android Studio

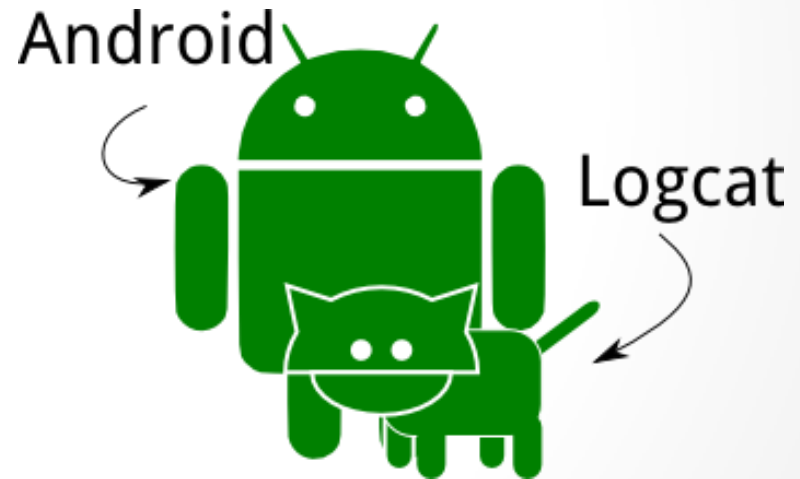
1. Open your project in Android Studio.
2. Click Debug  in the toolbar.
3. On the Choose Device window, select a hardware device from the list or choose a virtual device.
4. Click OK. Your app starts on the selected device.



Logging

Logs:

- Verbose
- Debug
- Information
- Warning
- Error



DDMS

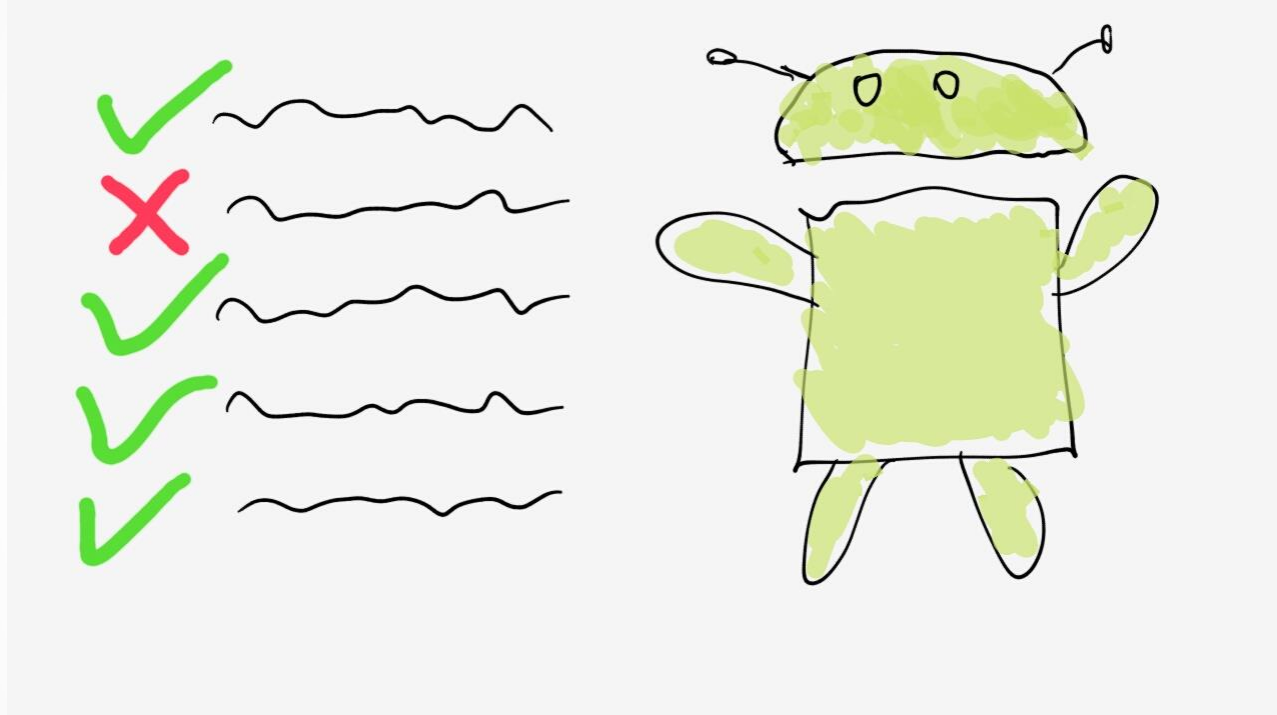
Dalvik Debug Monitor Server



Provides port-forwarding services, screen capture on the device, thread and heap information on the device, logcat, process, and radio state information, incoming call and SMS spoofing, location data spoofing, and more.



Unit tests



Class assignment

Please open the Class Assignment 3.pdf file located in the Moodle page of the course and follow the instructions.



Summary

Now we know:

- How to debug Android applications.
- How to write Log messages.
- What the DDMS is.
- How to write and use Unit tests.

