UROP Checkpoint Presentation

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All code available on:
https://gitlab.doc.ic.ac.uk/rb3018/urop

Progress so far

Completed:

- **Problem 1.5** - _Detect if the user uses adblocker(s)_

- **Problem 1.6** - _Detect if the user uses anti-virus app(s)_

- For both of these, a toast message is shown, either showing the name of the adblocker/anti-virus app installed, or stating that no such app has been found

Milestones in progress

Problem 1.1

Track changes in the configuration of AdvertisingID

- Displays the current AdvertisingID as a toast message

Problem 1.2

Track changes in the configuration of hide device in Bluetooth settings

- Displays a toast message when Bluetooth is switched on and off

- **CHALLENGE:** the emulators in Android Studio do not support Bluetooth, so I have not been able to test anything yet

Milestones in progress

Problem 1.3

Track changes of passcode/PIN for the smartphone's screen lock

- Currently has a working DeviceAdminReceiver (a subclass of BroadcastReceiver, the class used for detecting WiFi and Bluetooth changes) which can lock the phone's screen. This BroadcastReceiver can be used to show a toast when the device password is changed

- **CHALLENGE:** I spent a long time debugging, but have so far been unable to set up a DeviceAdminReceiver which tracks changes made to the device password. Still causing the app to crash

Milestones in progress

Problem 1.7

Detect if the user uses VPN app(s) when connected to a public network

- I have created a button which should be able to detect whether a VPN has been switched on while the user is connected to a public network, and displays a toast message if this is the case

- **CHALLENGE:** the emulators in Android Studio do not support WiFi, so I have not been able to test anything yet

Milestones in progress

Problem 1.8

Detect if the user turns off WiFi when not actively being used

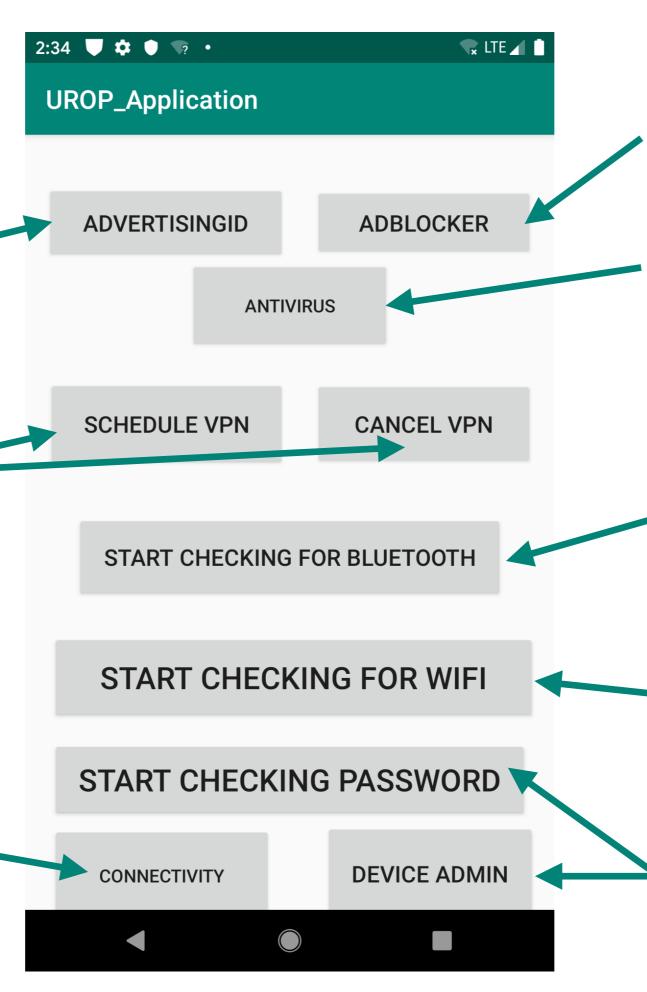- I have created a button which detects whether WiFi has been switched off by the user

- **CHALLENGE:** the emulators in Android Studio do not support WiFi, so I have not been able to test anything yet

- **CHALLENGE:** I was wondering what is meant by "not actively being used"? What are safe assumptions to make?

Main UI

Displays the current AdvertisingID

Displays whether an adblocker app is installed

Displays whether an antivirus app is installed

Control the JobService used when checking for a VPN

Starts BroadcastReceiver which checks whether Bluetooth is switched on

Starts BroadcastReceiver which checks whether WiFi is switched on

Starts BroadcastReceiver which checks whether Airplane Mode is enabled (test button for understanding BroadcastReceivers)

Check whether password has been changed

2:34

UROP_Application

ADVERTISINGID   ADBLOCKER

ANTIVIRUS

SCHEDULE VPN   CANCEL VPN

START CHECKING FOR BLUETOOTH

START CHECKING FOR WIFI

START CHECKING PASSWORD

CONNECTIVITY   DEVICE ADMIN