

Mobile Application Development

Produced
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Background & Introduction





Outline

- ❑ My Background
- ❑ Module Description
- ❑ Learning Objectives
- ❑ Structure
- ❑ Assessment
- ❑ Labs & Case Study



My Background *

- ❑ David Drohan BSc.,MSc.
- ❑ Lecturing Software Development since 1995
- ❑ Currently delivering Mobile & Web Development Modules on 3rd year, 4th year and MSc Programmes
- ❑ Contact me at
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 - @daithid73 (twitter)
 - 051 302683 (office)



Module Description *

- Design, build and deploy a multi-screen mobile application incorporating an intuitive and efficient navigation mechanism.
- Structure the implementation using accepted best-practice with respect to patterns, frameworks and tools.
- Incorporate localised persistence models + simple access to remote services.
- Introduce context services such as location/camera and/or other sensor access.



Learning Outcomes *

- ❑ Decompose an application into its constituent parts, including but not limited to: core application components, user experience resources, packaging.
- ❑ Design a coherent User Experience - using appropriate tools, practices and guidelines - for a moderately sized application.
- ❑ Complete the implementation of a medium sized application, based on a limited set of design patterns.
- ❑ Model the application lifecycle including effective patterns for UI state save/resume, background processing and interactions with external applications and system services
- ❑ Structure persistent storage on a device and reliably save and restore application state



Structure

- ❑ Week 01 – 02 : App Design & Introduction to Android

- ❑ Week 02 – 03 : Android Anatomy
- ❑ Week 04 – 05 : UI Design Part 1
- ❑ Week 06 – 07 : UI Design Part 2
- ❑ Week 08 – 09 : Android Persistence
- ❑ Week 10 : Android Multithreading

- ❑ Week 12 : Project Demos



Assessment

- ❑ 100% Continuous Assessment
 - 1 Individual Assignment – Due week 7 (**40%**)
 - 1 Individual Project – Due week 13 (**60%**)
 - ◆ Demos Week 12
 - Project Ideas **MUST** be unique **AND** all your own original work (mostly!)
 - 1st come 1st served approach to Assignment/Project Titles
 - **Note : Assignment CAN overlap with Project**



Practical Labs Overview *

❑ We'll Cover

- Setting Up/Using Android Studio
- The classic “Hello World” (in an Android App)
- A “Donation” Case Study (next slides)
 - we'll develop a few different versions to demonstrate the use of some of the most common features of an Android App.
- Some Theory & Concepts along the way...

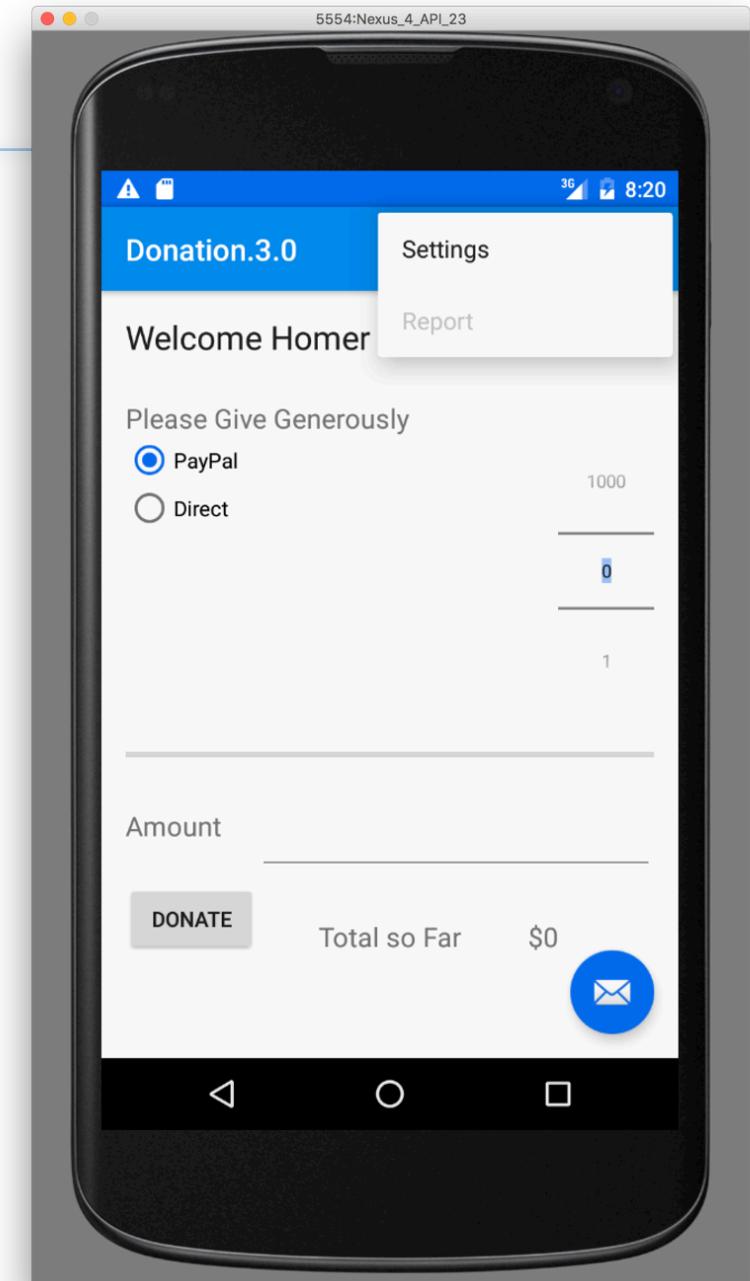


Case Study

❑ **Donation** – an Android App to keep track of donations made to ‘*Homers Presidential Campaign*’.

❑ App Features

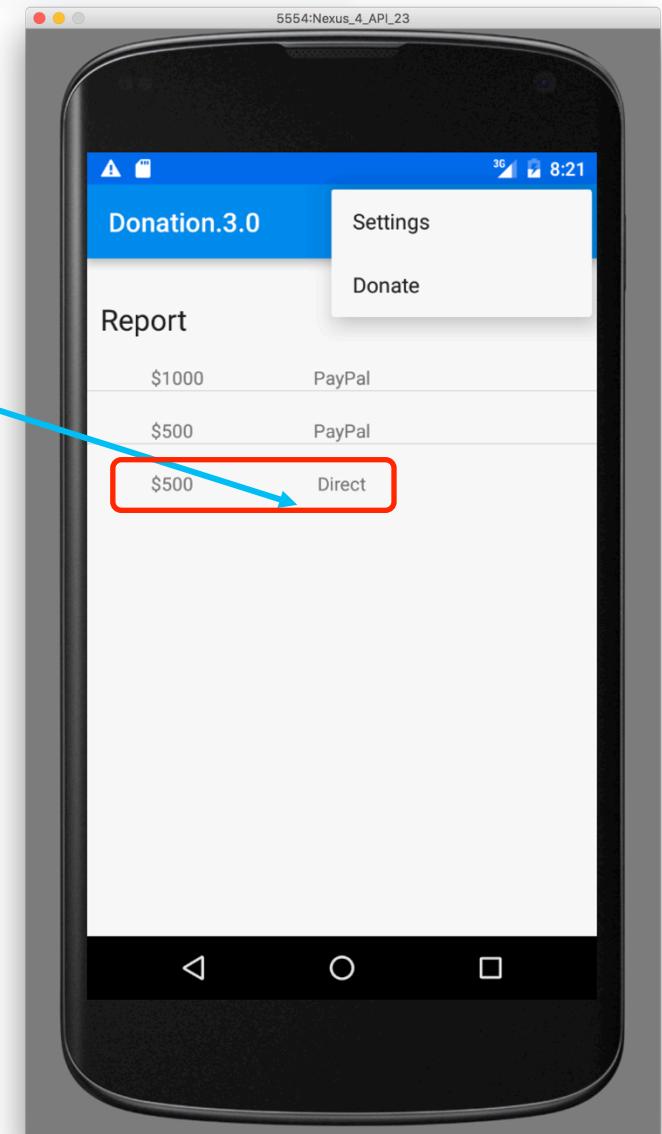
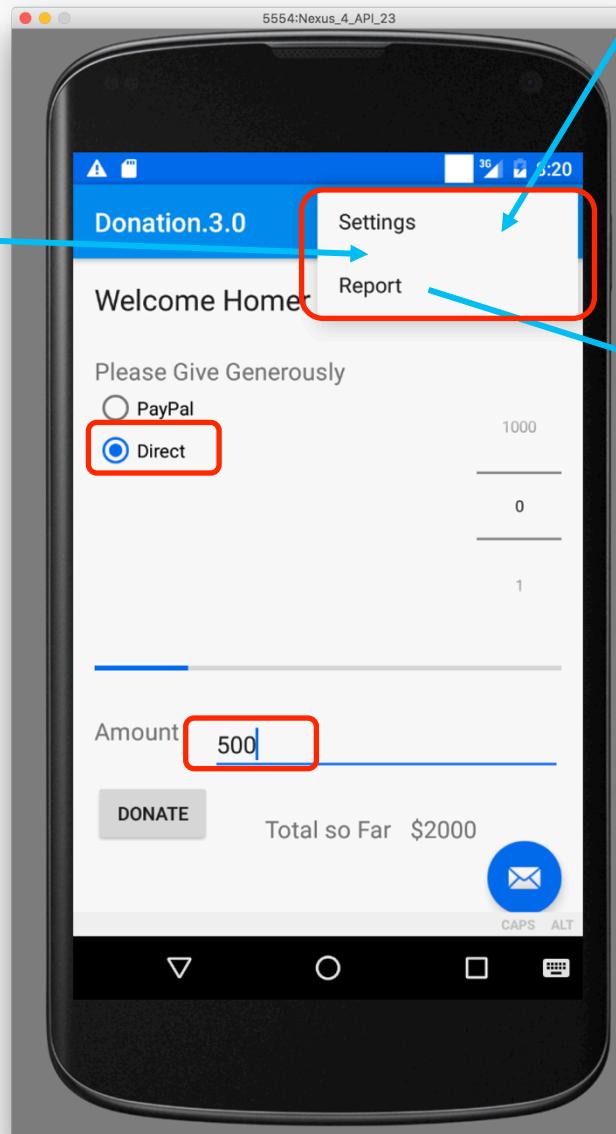
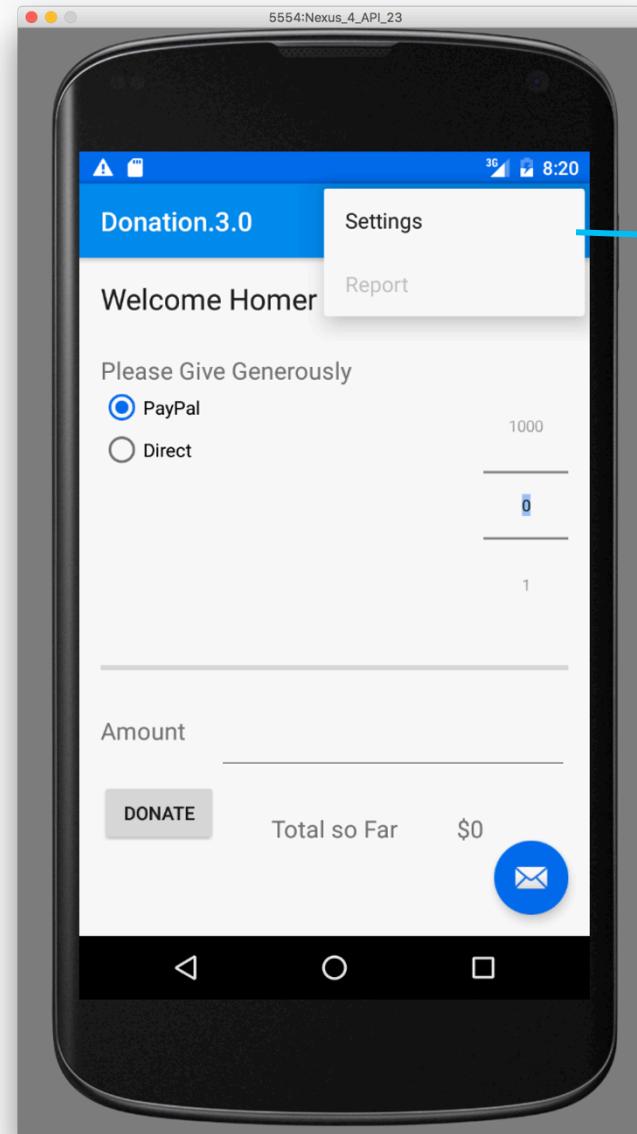
- Accept donation via number picker or typed amount
- Keep a running total of donations
- Display report on donation amounts and types
- Display running total on progress bar





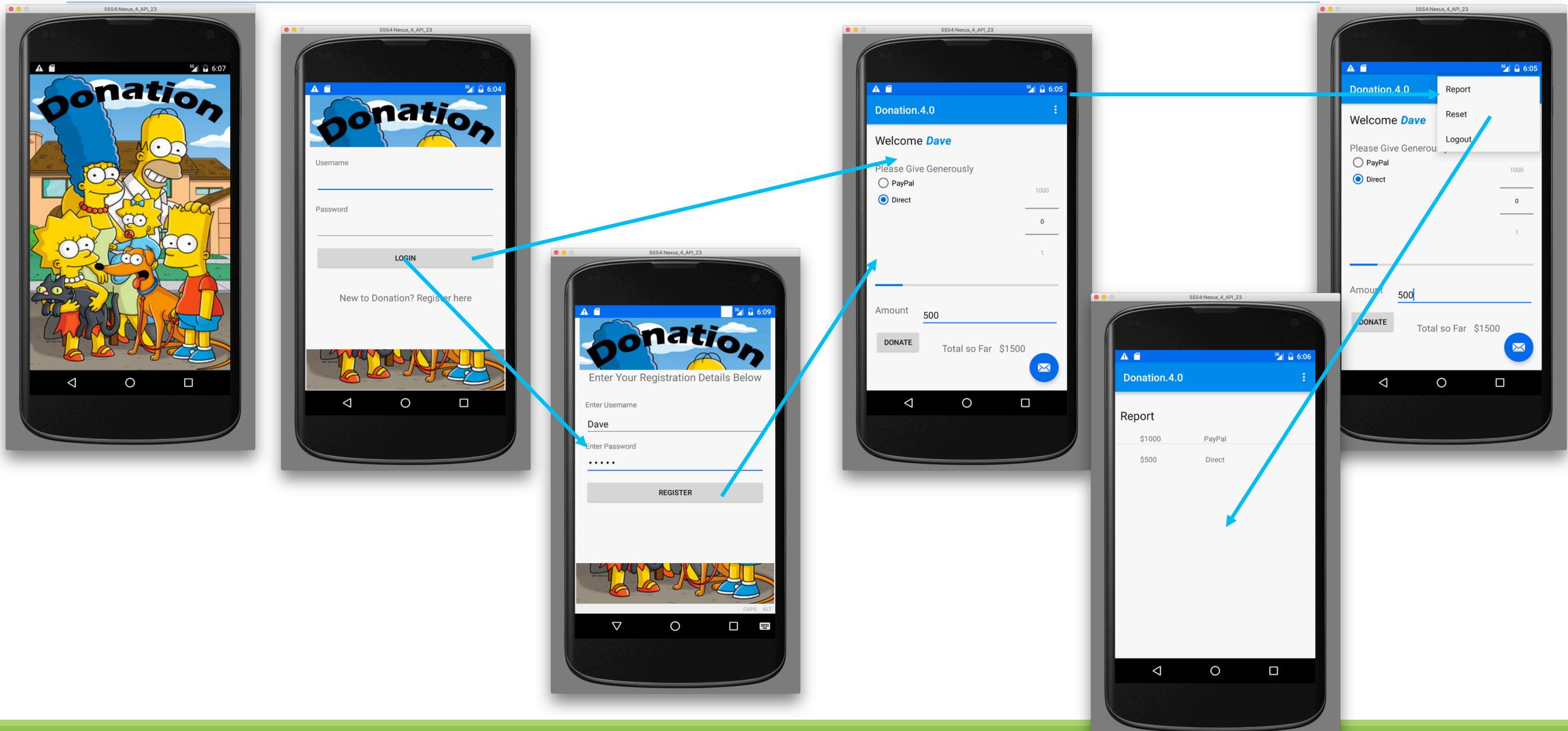
Donation 3.0 *

Custom Menu





Ultimate Donation





Resources

ddrohan.github.io

ddrohan.gitbooks.io

moodle.wit.ie



Questions?