Mobile Application Development

Produced by

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Background & Introduction

Outline

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

Module Description

❑ "This module examines the software development techniques used in the design of Graphical User Interfaces (GUIs). It addresses creation of GUIs through mobile applications, and how to integrate these apps with web based applications."

❑ "It focuses primarily on the Android Standard Development Kit (SDK)."

❑ "Finally, Database Connectivity concepts are introduced to the student, with extensive practical exercises taking the student through all major aspects of the design and development of GUI Mobile Applications."

Learning Objectives

❑ Understand and apply the concepts of class hierarchy & encapsulation that underlie the idea of packages, in application development.

❑ Be capable of **designing** and **developing** Mobile Apps from concept through to completion.

❑ Demonstrate the use of **Database** Connectivity to develop more sophisticated apps in a mobile environment.

❑ Understand the difference between **Web App** and **Native Mobile App** Development.

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 (6th March) (60%)

- 1 Individual Project – Due week 13 (30th April) (40%)

  ◆ Demos Week 12 (18th April)

- 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*

My Background *

❑ David Drohan BSc.,MSc.

❑ Lecturing Software Development since 1995

❑ Currently delivering Mobile & Web Development Modules on $3^{rd \ year}$, $4^{th \ year}$ and MSc Programmes

❑ Contact me at

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- 051 302683 (office)

Training Course Overview *

❑We'll Cover

- Setting Up/Using Android Studio

- The classic "Hello World" (in an Android App)

- A "Donation" Case Study (next slides)

  o we'll develop a few different versions to demonstrate the use of some of the most common features of an Android App.
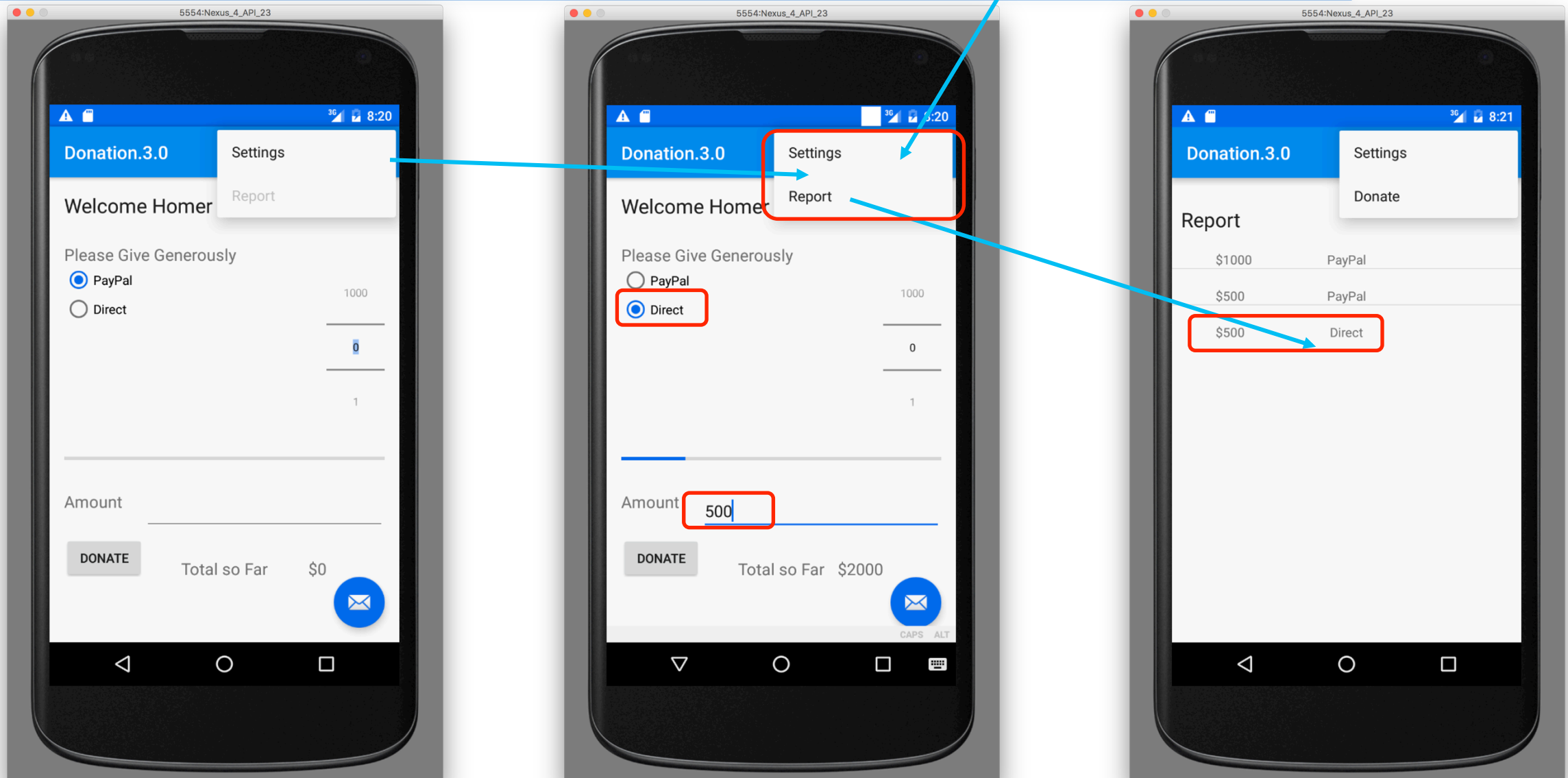
- Some Theory & Concepts along the way…

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
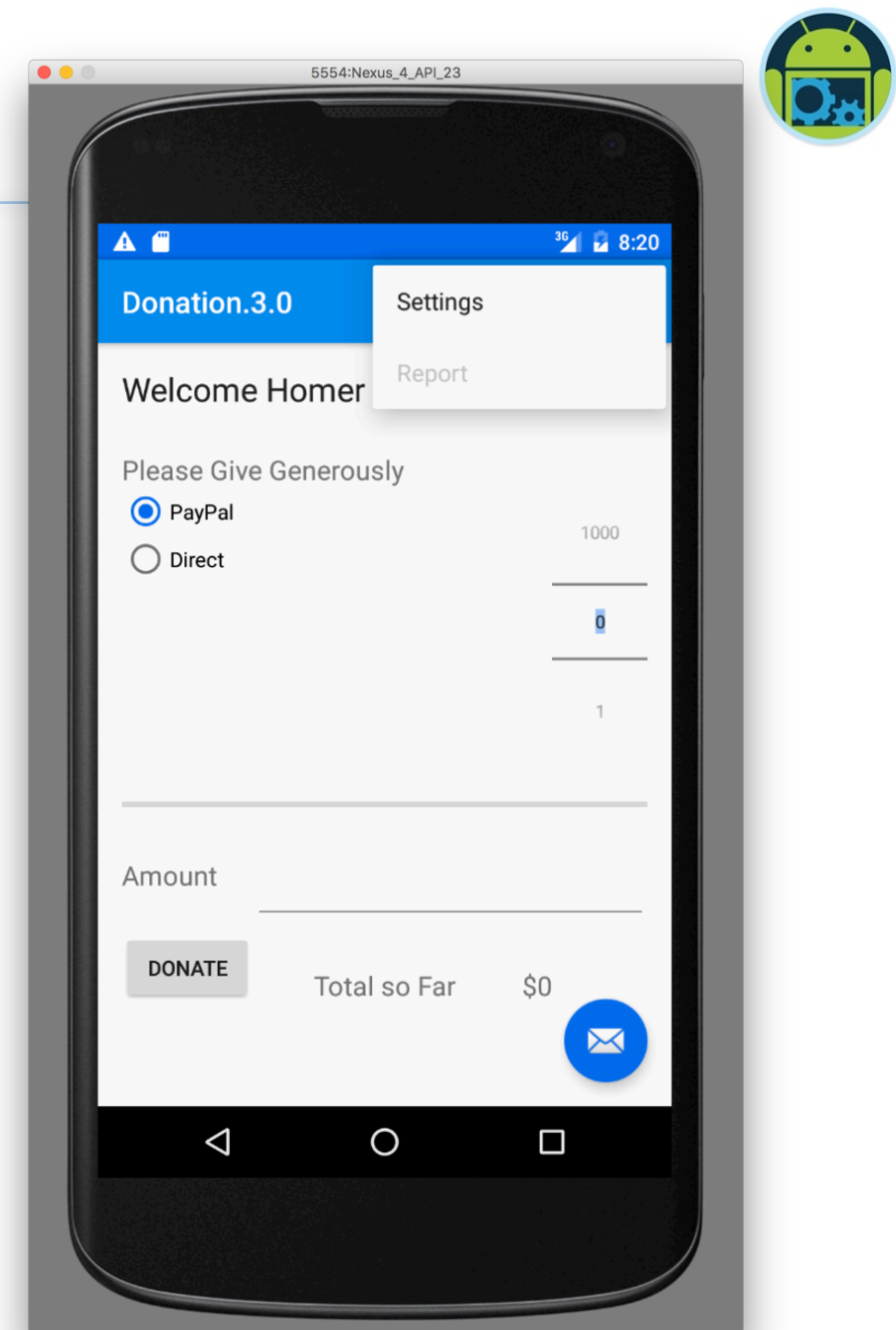
Donation 3.0 *

Custom Menu

Resources

ddrohan.github.io

ddrohan.gitbooks.io

moodle.wit.ie

Questions?