

Introduction

Session 1



Objectives

- Installing Android Studio (Including java JDK)
- Android SDK manager
- AVD manager
- Project Structure
- Basic “hello world app”
- XML Layouts
- Strings.xml resource file
- Activity & Lifecycle



Installing Android Studio

Download Link:

- <https://developer.android.com/sdk/index.html>



Android SDK manager

The Android SDK Manager separates the SDK tools, platforms, and other components into packages for easy access and management.

Link:

- <http://developer.android.com/tools/help/sdk-manager.html>



AVD (Android Virtual Device) manager

The AVD Manager provides a graphical user interface in which you can create and manage Android Virtual Devices (AVDs), which are required by the Android Emulator

Link:

- <http://developer.android.com/tools/help/avd-manager.html>



Project Structure (The Team)

Every great team is composed of people who play different roles.

Do you want to do the job right? You need the right team. Android Projects have a few key elements and each has a role to play:

- Java: *The Professional*
- Resources: *The Artist*
- AndroidManifest.xml: *The Boss*
- Intent: *The Job itself*

Refer to Project Structure pdf



First Project (“hello world app”)

Link

- <https://developer.android.com/training/basics/firstapp/creating-project.html>



View Object

- The basic building block for user interface is a **View** object which is created from the View class and occupies a rectangular area on the screen and is responsible for drawing and event handling. View is the base class for widgets, which are used to create interactive UI components like buttons, text fields, etc.
- The **ViewGroup** is a subclass of **View** and provides invisible container that hold other Views or other ViewGroups and define their layout properties.



XML Layouts

- A layout defines the visual structure for a user interface
- You can declare a layout in two ways:
 - Declare UI elements in XML.
 - Instantiate layout elements at runtime.
- XML layouts are composed by View elements



XML Layouts (Continued)

- Relative
- Linear
- Table



Strings.xml Resource file

- Located at res/values
 - **strings.xml**
- Application wide available strings
- Promotes good software engineering
- UI components made in the UI editor should have text defined in strings.xml



Activities

- The basis of android applications
- A single Activity defines a single viewable screen
 - the actions, not the layout
- Can have multiple per application
- Each is a separate entity
- They have a structured life cycle
 - Different events in their life happen either via the user touching buttons or programmatically

Refer to Android Activity Lifecycle & State pdf



Revision

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Any Questions?
Thank You

