



Android Development Training Curriculum

From:

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Android Development Training Curriculum		
1	Android Development Overview	What Is Android?
		Android Versions
		Features of Android
		Architecture of Android
		Obtaining the Required Tools
		The Android Developer Community
		Launching Your First Android Application
2	Android Development Prerequisites	Java JDK 8 or later
		Node Package Manager (npm) 3.10 or later
		Android Studio 2.3 or later
3	Environment Setup	Android framework
		Open Handset Alliance libraries
		Operating system
		Computer hardware
		Installing and Configuring Your Support Tools
		Getting the Java Development Kit
		Acquiring the Android SDK
		Downloading the Android SDK
		Following and setting your tools path
		Getting Android Studio
		Installing Android Studio
		Configuring Android Studio
		Navigating the Android SDK
		Targeting Android Platforms
		Using SDK Tools for Everyday Development
Saying hello to the emulator		
Getting physical with a real Android device		
Debugging your work		
4	Android Development Fundamentals	Activities
		Services
		Broadcast receivers
		Content providers



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		The manifest file
		Understanding Resources
		Dimensions
		Styles
		Themes
		Values
		Menus
		Colors
5	Your First Android Project	
		Starting a New Project in Android Studio
		Deconstructing Your Project
		Responding to error messages
		Understanding the Build Target and Min SDK Version settings
		Setting Up an Emulator
		Creating Launch Configurations
		Running the Hello Android App
		Running the app in the emulator
		Checking deployment status
		Understanding Project Structure
		Navigating the app's folders
		Viewing the application's manifest file
		Viewing the project.properties file
		Closing Your Project
6	Designing the User Interface	
		Creating the Silent Mode Toggle Application
		Laying Out the Application
		Using the XML layout file
		Using the Android SDK layout tools
		Using the visual designer
		Developing the User Interface
		Viewing XML layout attributes
		Working with views
		Adding an Image to Your Application
		Placing an image onscreen
		Adding the image to the layout
		Creating a Launcher Icon for the Application
		Designing a custom launcher icon



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		Adding a custom launcher icon
		Adding a Toggle Button View
7	Coding Your Application	
		Understanding Activities
		Working with methods, stacks, and states
		Tracking an activity's life cycle
		Creating Your First Activity
		Starting with onCreate
		Telling Android to display the user interface
		Handling user input
		Writing your first event handler
		Working with the Android Framework Classes
		Getting good service
		Toggle Silent mode with AudioManager
		Installing Your Application
		Running your app in an emulator
		Installing on a physical Android device
		Responding to Errors
		Using the Dalvik Debug Monitor Server
		Using the Android debugger
		Thinking Beyond the Application Boundaries
		Interacting with your application
		Testing whether your application works
8	Turning Your Application into a Home Screen Widget	
		Working with App Widgets in Android
		Working with remote views
		Using AppWidgetProviders
		Working with Pending Intents
		Understanding the Android intent system
		Understanding intent data
		Evaluating intents
		Using pending intents
		Creating the Home Screen Widget
		Implementing the AppWidgetProvider
		Communicating with the app widget
		Building the app widget's layout
		Doing work inside an AppWidgetProvider
		Working with the app widget's metadata



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		Registering your new components with the manifest
		Placing Your Widget on the Home Screen
9	Publishing Your App to the Google Play Store	Creating a Distributable File
		Revisiting the manifest file
		Choosing your tools
		Digitally signing your application
		Creating the APK file
		Creating a Google Play Developer Profile
		Pricing Your Application
		Choosing the paid model
		Choosing the free model
		Getting Screen Shots for Your Application
		Uploading Your Application to the Google Play Store
		Watching the Number of Installs Soar
10	Understanding Menu	Understanding Options and Context Menus
		Creating Your First Menu
		Defining the XML file
		Handling user actions
		Creating a reminder task
		Creating a Context Menu
		Creating the menu XML file
		Loading the menu
		Handling user selections
11	Handling User Input	Creating the User Input Interface
		Creating an EditText view
		Displaying an onscreen keyboard
		Getting Choosy with Dates and Times
		Creating picker buttons
		Creating the date picker
		Creating the time picker
		Creating an Alert Dialog Box
		Seeing why you should work with dialog boxes
		Choosing the appropriate dialog box for a task
		Creating your own alert dialog box



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		Validating Input
		Toasting the user
		Using other validation techniques
12	Getting Persistent with Data Storage	
		Finding Places to Put Data
		Viewing your storage options
		Choosing a storage option
		Creating Your Application's SQLite ContentProvider
		Understanding how the SQLite ContentProvider works
		Creating a ContentProvider to hold the database code
		Defining the key elements of a database
		Visualizing the SQL table
		Creating the database table
		Resolving ContentProvider URLs
		Creating and Editing Tasks with SQLite
		Inserting a task entry
		Loaders
		Returning all the tasks with a cursor
		Understanding the SimpleCursorAdapter
		Deleting a task
13	JSON	
		Understanding JSON object
		Understanding JSON array
		Create EmployeeDetails Android App using JSON
		Working with Lists
		Working with Android JSON Parser
14	XML	
		Understanding XML Structure
		Android XML SOAP Parsing
		Android XMLPullParser
		Create EmployeeDetails Android App using XML
		Working with Lists
		Working with Android XML
15	Android Project	
		Creating an EmployeeDetails Android App
		Setting Up and Running the Projects in Android



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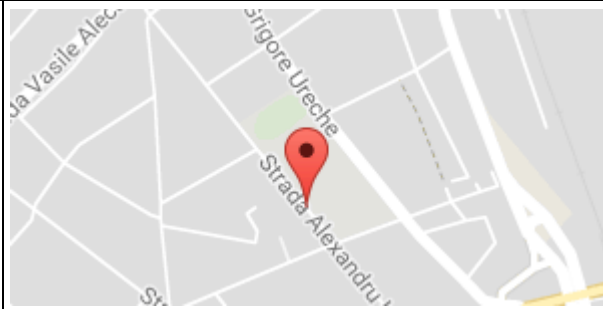
	Studio
	Basic Layout
	Working with Lists
	Working with a SQLite Database
	Using Intents and passing information between Activities
	Calling, Emailing, and Texting an Employee
	Navigating Up and Down the Org Chart
	Publishing the App

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