

1) Introduction to Mobile Apps

- I. Why we Need Mobile Apps
- II. Different Kinds of Mobile Apps
- III. Briefly about Android

2) Introduction Android

- I. History Behind Android Development
- II. What is Android?
- III. Pre-requisites to learn Android
- IV. Brief Discussion on Java Programming

3) Android Architecture

- I. Overview of Android Stack
- II. Android Features
- III. Introduction to OS layers

4) Deep Overview in Android Stack

- I. Linux Kernel
- II. Libraries
- III. Android Runtime
- IV. Application Framework
- V. Dalvik VM

5) Installing Android Machine

- I. Configuring Android Stack
- II. Setting up Android Studio
- III. Working with Android Studio
- IV. Using Older Android Tools

6) Creating First Android Application

- I. Creating Android Project
- II. Debugging Application through DDMS
- III. setting up environment
- IV. AVD Creation
- V. Executing Project on Android Screen

7) Android Components

- I. Activities
- II. Services
- III. Broadcast Receivers
- IV. Content Providers

8) Hello World App

- I. Creating your first project
- II. The manifest file
- III. Layout resource
- IV. Running your app on Emulator

9) Building UI with Activities

- I. Activities
- II. Views, layouts and Common UI components
- III. Creating UI through code and XML
- IV. Activity lifecycle
- V. Intents
- VI. Communicating data among Activities

10) Advanced UI

- I. Selection components (GridView, ListView, Spinner)
- II. Adapters, Custom Adapters
- III. Complex UI components
- IV. Building UI for performance
- V. Menus
- VI. Creating custom and compound Views

11) Notifications

- I. Toast, Custom Toast
- II. Dialogs
- III. Status bar Notifications

12) Multithreading

- I. Using Java Mutithreading classes
- II. AsyncTask
- III. Handler

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IV. Post

V. Writing an animated game

13) Styles and Themes

I. Creating and Applying simple Style

II. Inheriting built-in Style and User defined style

III. Using Styles as themes

14) Resources and Assets

I. Android Resource

II. Using resources in XML and code

III. Localization

IV. Handling Runtime configuration changes

15) Intent, Intent Filters and Broadcast

Receivers

I. Role of filters

II. Intent-matching rules

III. Filters in your manifest

IV. Filters in dynamic Broadcast Receivers

V. Creating Broadcast receiver

Receiving System Broadcast

VI. Understanding Broadcast action, category and data

VII. Registering Broadcast receiver through code and through XML

VIII. Sending Broadcast

16) Data Storage

I. Shared Preferences

II. Android File System

III. Internal storage

IV. External storage

V. SQLite

a. IntroducingSQLite

b. SQLiteOpenHelper and creating a database

c. Opening and closing a database

d. Cursors Inserts, updates, and deletes

VI. Network

17) Content Providers

I. Accessing built in content providers

II. Content provider MIME types

III. Searching for content

IV. Adding, changing, and removing content

V. Creating content provider

VI. Working with content files

18) Services

I. Overview of services in Android

II. Implementing a Service

III. Service lifecycle

IV. Inter Process Communication (AIDL Services)

19) Multimedia in Android

I. Multimedia Supported audio formats

II. Simple media playback

III. Supported video formats

IV. Simple video playback

20) Location Based Services and Google Maps

I. Using Location Based Services

II. Finding current location and listening for changes in location

III. Proximity alerts

IV. Working with Google Maps

i. Showing Google map in an Activity

ii. Map Overlays

iii. Itemized overlays

iv. Geocoder

v. Displaying route on map

21) Web Services and Web View

I. Consuming web services

II. Receiving HTTP Response (XML, JSON)

III. Parsing JSON and XML

IV. Using Web View

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22) Sensors

- I. How Sensors work
- II. Using Orientation and Accelerometer sensors
- III. Best practices for performance

23) WiFi

- I. Monitoring and managing Internet connectivity
- II. Managing active connections
- III. Managing WiFi networks

24) Telephony Services

- I. Making calls
- II. Monitoring data connectivity and activity
- III. Accessing phone properties and status
- IV. Controlling the phone
- V. Sending messages

25) Camera

- I. Taking pictures
- II. Media Recorder
- III. Rendering previews

26) Bluetooth

- I. Controlling local Bluetooth device
- II. Discovering and bonding with Bluetooth devices
- III. Managing Bluetooth connections
- IV. Communicating with Bluetooth

27) More

- I. Fragments
- II. Material Design
- III. Gradle
- IV. NEW TOPICS: Since each new version of Android has new features, we keep extra time for adding custom topics in every batch. You can request any Android Topic.

28) Android Application Deployment

- I. Android Application Deployment on device with Linux and Windows
- II. Android Application Deployment on Android Market

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