Android App. Development

Learn"How to make Android Application"

Introduction Android

- Introduction Android
- History behind Android Development
- What is Android?
- Pre-requisites to learn Android
- Brief Discussion on Java Programming
- Android Architecture
- Overview of Android Stack
- Android Features
- Introduction to OS layers
- Deep Overview in Android Stack
- Linux Kernel
- Libraries
- Android Runtime
- Application Framework
- Dalvik VM
- Installing Android Machine
- Configuring Android Stack
- Setting up Android Studio
- Working with Android Studio
- Using Older Android Tools

Creating First Android Application

- Creating Android Project
- Debugging Application through DDMS
- setting up environment
- AVD Creation
- Executing Project on Android Screen
- Android Components
- Activities
- Services
- Broadcast Receivers
- Content Providers
- Hello World App
- Creating your first project
- The manifest file
- Layout resource
- Running your app on Emulator
- Building UI with Activities
- Activities
- Views, layouts and Common UI components
- Creating UI through code and XML
- Activity lifecycle
- Intents
- Communicating data among Activities

Advanced UI

- Selection components (GridView, ListView, Spinner)
- Adapters, Custom Adapters
- Complex UI components
- Building UI for performance
- Menus
- Creating custom and compound Views
- Notifications
- Toast, Custom Toast
- Dialogs
- Status bar Notifications
- Multithreading
- Using Java Multithreading classes
- AsyncTask
- Handler
- Post
- Writing an animated game
- Styles and Themes
- Creating and Applying simple Style
- Inheriting built-in Style and User defined style
- Using Styles as themes

Resources and Assets

- Android Resource
- Using resources in XML and code
- Localization
- Handling Runtime configuration changes
- Intent, Intent Filters and Broadcast Receivers
- Role of filters
- Intent-matching rules
- Filters in your manifest
- Filters in dynamic Broadcast Receivers
- Creating Broadcast receiver
- Receiving System Broadcast
- Understanding Broadcast action, category and data
- Registering Broadcast receiver through code and through XML
- Sending Broadcast

Data Storage

- Data Storage
- Shared Preferences
- Android File System
- Internal storage
- External storage
- SQLite
- Introducing SQLite
- SQLiteOpenHelper and creating a database
- Opening and closing a database
- Working with cursors Inserts, updates, and deletes
- Network
- Content Providers
- Accessing built in content providers
- Content provider MIME types
- Searching for content
- Adding, changing, and removing content
- Creating content provider
- Working with content files

Services

- Overview of services in Android
- Implementing a Service
- Service lifecycle
- Inter Process Communication (AIDL Services)
- Multimedia in Android
- Multimedia Supported audio formats
- Simple media playback
- Supported video formats
- Simple video playback
- Location Based Services and Google Maps
- Using Location Based Services
- Finding current location and listening for changes in location
- Proximity alerts
- Working with Google Maps
- Showing google map in an Activity
- Map Overlays
- Itemized overlays
- Geocoder
- Displaying route on map

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Web Services, WebView, Sensors, Wifi, Camera

- Consuming web services
- Receiving HTTP Response (XML, JSON)
- Parsing JSON and XML
- Using WebView
- Sensors
- How Sensors work
- Using Orientation and Accelerometer sensors
- Best practices for performance
- Monitoring and managing Internet connectivity
- Managing active connections
- Managing WiFi networks
- Taking pictures
- Media Recorder
- Rendering previews

Telephony Services, Bluetooth & More

- Making calls
- Monitoring data connectivity and activity
- Accessing phone properties and status
- Controlling the phone
- Sending messages
- Controlling local Bluetooth device
- Discovering and bonding with Bluetooth devices
- Managing Bluetooth connections
- Communicating with Bluetooth
- Fragments
- Material Design
- Gradle
- 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.

Android Application Deployment

- Android Application Deployment on device with Linux and Windows
- Android Application Deployment on Android Market

Project: work on Live Project

Thanks
For any queries
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