

Android 10.0

Introduction of Android & History

- Introduction to Mobile App Development
- What is Android?
- Why Android?
- Features of Android
- Key features of Android
- What is Open Source Project?
- Version wise Features and Drawbacks

Android Architecture

- Applications
- Android Frameworks
- Linux Kernel
- Core Libraries
- Android Runtime
- Dalvik virtual Machine

Setup of Android Development Environment

- System Requirement
- Java Installation
- Android Studio Overview
- Installation of Android Studio
- Create Android Virtual Device
- Android Studio Features
- Android SDK & Tools

First Program

- Hello World Program
- Android Studio Project Structure
- Android Resources Organizing & Accessing
- Alternative Resources
- Accessing Resources
- Accessing Resources in Java
- Accessing Resources in XML

XML

- Introduction & Overview
- Advantages of XML
- Rules to writing an XML

Basic Android User Interface

- Relative Layout
- Linear Layout
- Table Layout
- Frame Layout
- Fragment
- Grid Layout
- Constraint Layout

Dynamic Layout

- Relative Layout
- Linear Layout
- Table Layout

Common UI Components and Events

- TextView

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- Button
- Checkbox
- Toggle button
- Seek Bar
- Rating bar
- Radio Button & Radio Group
- Image View
- Image Button

Text Fields

- Plaintext
- Password
- Password (Numeric)
- Email
- Phone
- Postal Address
- Multiline Text
- Time
- Date
- Number
- Number (signed)
- Number Decimal

Components overview

- Activity Life Cycle
- Intents
- Broadcast Receivers
- Services
- Content provider

Advanced User Interface

- What Is an Adapter?
- How Do Adapter Views Work?
- Creating an Array Adapter
- Listview with listener
- Gridview with Listener
- Spinner with Listener
- Autocomplete TextView (List/Grid/Spinner/AutoComplete)

Multimedia

- Media player
- Video view
- Audio Recording
- Video Recording

Telephony Manager

- IMEI
- SMS
- Calls
- Emails

Wi-Fi Manager

- Network checking
- Manage Active connections

Phone Status

- How to vibrate the device
- How to Ringer the device
- How to Silent the device

Bluetooth

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- [Controlling Bluetooth](#)
- [Discoverable networks](#)
- [Connect Bluetooth](#)

Intents

- [Implicit](#)
- [Explicit](#)
- [Passing Data Using Intents](#)

Dialogs

- [Toast](#)
- [Creating a Custom Toast View](#)
- [Progress Dialog Horizontal/Spinner](#)
- [Alert Dialog Predefined](#)
- [Alert Dialog Custom](#)
- [Date Picker Dialog](#)
- [Time Picker Dialog](#)
- [Dialog Fragment](#)

Activity

- [Activity Life Cycle](#)
- [Call back methods In Activity Life Cycle](#)

Service

- [Service Life Cycle](#)
- [Call back methods In Service Life Cycle](#)
- [Types of services](#)

Broad Cast Receivers

- [What is broad cast Receiver](#)
- [Implementing Broad cast Receiver](#)
- [System Broad casts](#)

Content Provider

- [Basic content provider](#)
- [Working with content providers](#)

Notifications

- [What is notification](#)
- [How to get notification Service](#)
- [Pending Intent](#)

Web Services

- [Introduction to Web services](#)
- [Architecture of web service](#)
- [Components of Web Services](#)
- [Advantages of Web Services](#)

JSON

- [Introduction of JSON](#)
- [Architecture of JSON](#)
- [Types of Request](#)
- [Registration Using JSON Example App with Post Method](#)
- [Spinner/Listview / Gridview Data from Server](#)

Butter Knife

- [Using Butter Knife in Android applications](#)
- [Exercise: Using Butter Knife in Android applications](#)

[Android data binding resources](#)

Data binding

- [Using data binding in Android applications](#)
- [Exercise: Using data binding in Android applications](#)
- [Android data binding resources](#)

Fragments

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- [Introduction & life cycle](#)
- [Fragment Management and integration](#)
- [Fragment transactions & Replace](#)
- [Example Program for Fragments](#)

Android System Overview

- [Shared Preferences](#)
- [File System](#)

SQLite Databases

- [Introduction to SQLite](#)
- [SQLite Open Helper](#)
- [CRUD operations](#)

Active Android Library

- [Introduction](#)
- [Advantages Active Android](#)
- [Difference between SQLite and Active Android](#)
- [CRUD Operations](#)

Retrofit

- [Introduction to retrofit Library](#)
- [AsyncTask Vs Volley Vs Retrofit](#)
- [AsyncTask disadvantages](#)
- [Retrofit dependency libraries](#)
- [Retrofit convertors](#)
- [Retrofit Communication process](#)
- [Example programs on retrofit](#)

Volley

- [Introduction to Volley Library](#)
- [Volley dependency libraries](#)
- [Volley Communication process](#)
- [Example programs on retrofit](#)

Android Material Design

- [Introduction & Overview](#)
- [Material design features](#)
- [Difference between Android UI Components & Material Design Components](#)
- [How to add dependency libraries for your project](#)
- [Floating Labels \(Material Design for EditText\)](#)
- [Recycler View](#)
- [Tabs With Material Design](#)
- [Material Design Action Bar/App Bar](#)
- [Navigation Drawer](#)
- [Bottom Navigation](#)
- [Snack Bar](#)

Firebase

- [Introduction to Firebase](#)
- [How to Configure Firebase Environment](#)
- [How to Configure Firebase Database](#)
- [How to Configure Firebase Storage](#)
- [How to Configure Firebase Notifications](#)
- [Firebase Hosting](#)
- [Firebase Crash Reporting](#)
- [Firebase Authentication](#)

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Google MAPS

- [Introduction to location based Services in Android](#)
- [Creating SHA-1 key for your signature](#)
- [Register with Google Console](#)
- [Google Maps View](#)
- [Map Fragment](#)
- [Markers on Map](#)
- [Getting Current location](#)
- [Distance between two locations](#)

Google Places

- [Get Google places API Access](#)
- [List of search options to get data \(restaurants, bus stop etc.\)](#)
- [Map view with different places](#)

Animations

- [Introduction](#)
- [Apply animations for Activities/Images/TextView](#)

Admob Account

- [Types of adds](#)
- [How to add to app](#)
- [Maintenance](#)

Overview of Play store Account

- [Publish Signed APK](#)
- [Register for Google Play Android account](#)
- [Publishing your Android App](#)
- [Distribute your App as a paid App](#)
- [Updating your Android App](#)

Kotlin

- [What is Kotlin?](#)
- [Example programs](#)

New Additions

- [Autofill framework](#)
- [Security enhancements](#)
- [Secure key import into Keystore](#)
- [APK signature scheme with key rotation](#)
- [Run time permission](#)
- [New Layout \(Guide line vertical/horizontal\)](#)
- [Post Man overview](#)
- [Git Hub](#)
- [Horizontal/Vertical Divider](#)
- [Nav host fragment](#)
- [Validations](#)