

Android Programming

Session 1: About & Installation

✓ What is Android?	✓ History of Android
✓ Why Android?	✓ Environment Setup
✓ Features of Android	✓ Installation Android studio

Session 2: Android Basics & First Project Creation

✓ Android Architecture	✓ Android Activity
✓ Android Services	✓ AndroidBroadCastReceiver
✓ Android Content Provider	✓ First Hello World Example

Session 3: Project Structure

✓ Source Folder	✓ Generated Folder
✓ Assets folder	✓ Resources folder
✓ Android Manifest XML	

Session 4: XML & Layout designing

✓ Layout XML files	✓ RelativeLayout
✓ LinearLayout	✓ Frame Layout
✓ Tab Layout	✓ Table Layout

Session 5 JAVA & Layout designing

✓ Layout java file	✓ RelativeLayout
✓ LinearLayout	✓ Frame Layout
✓ Tab Layout	✓ Table Layout

Session 6: Event Handling

✓ Event Listeners & Event Handlers	✓ Event Listeners Registration
✓ Event Handling Examples	

Session 7: Activities & Intents

✓ Activity LifeCycle	✓ Implicit intent
✓ Explicit intent	✓ StartActivityForResult

Session 8: Advanced Views- List and Spinner (simple & custom)

✓ Add value in List-view	✓ Add value in Spinner
✓ Create custom list-view	

Session 9: Adapting Screen Orientation

✓ What is Screen Orientation	✓ how to use screen orientation
✓ example of screen orientation	

Session 10: Menus

✓ Adding option menus	✓ Adding popup menus
✓ Adding Context menus	

Session 11: Thread, Handler, Asyn Task & Dialog

✓ Main Application Threads & Worker Threads	✓ How to use handler class
✓ What is Asyn Task class	✓ Why use Asyn task class

Session 12: Fragments

✓ Fragment LifeCycle	✓ How to access fragment
✓ adding multiple fragment in activity	

Session 13: Shared Preferences

✓ What is Shared Preferences	✓ Saving key-value set
✓ get a handle to a shared preferences	✓ read and write shared preferences
Session 14: File Handling	
✓ Reading internal storage	✓ Write internal storage
Session 15: Room Persistence Library	
✓ Introduction to ROOM Persistent Library	✓ Working with DAO
✓ Opening and Closing Database in ROOM	✓ CRUD Operations with ROOM
Session 16: Job Scheduler	
✓ Introduction to Job Scheduler	✓ Working with Constants
✓ Working with Methods of Job Scheduler	✓ Types of Methods in Job Scheduler
✓ Working with Job Scheduler Public	
Session 17: Services , Notification, Alarm & Vibration	
✓ Lifecycle of a Service	✓ When to use Services
✓ Intent Service	
Session 18: Firebase	
✓ Introduction to Firebase	✓ Real Time Firebase Database
Session 19: SMS Sending & Receiving	
✓ Send SMS	✓ Receive SMS
Session 20: Graphics & Drawing	
✓ Introduction to OpenGL	✓ Scalable 2D /3DGraphics API
✓ Drawables	✓ ShapeDrawable
Session 21: SurfaceView & Sensors	
✓ What is Sensor & SurfaceView	✓ Types of Sensor
✓ Introducing sensor manager	
Session 22: Location & GPS	
✓ Maps and Geocoding	✓ Location based services
Session 23: Web Services & JSON Parsing & RxJava	
✓ Introduction to JSON file formats	✓ Using Web Services to connect to remote DB
✓ Significance of AsyncTask class	✓ Use JSON for data communication to Web Services
✓ Fetching data from JSON & loading into Activities	✓ Introduction to Retrofit Library with CRUD Operation
✓ Introduction to RxJava (RxAndroid) in Android	
Session 24: Widgets	
✓ Button View	✓ EditText View
✓ TextView View	✓ Image View
✓ Spinner	
Session 25: Android Animation	
✓ Introduction to Animation	✓ Animation Types
✓ TweenAnimation	✓ FrameAnimation
Session 26: Android Material Designing , Styles & themes	
✓ What is Material Design	✓ how to access material design in our project

✓ creating custom themes	
Session 27: Detecting Gesture	
✓ What is Gesture	✓ Android Detecting gesture example
✓ Project Implementation	
Session 28: Social Login - Facebook	
✓ Prerequisites	✓ Add the Facebook Login Button
✓ Register a Callback to Handle the Login Result	✓ Enable Chrome Custom Tabs
✓ Check Login Status	
Session 29: Social Login - Google	
✓ Prerequisites	✓ Get a configuration file
✓ Add the configuration file to your project	✓ Add the Google Services plugin
✓ Add Google Play Services	✓ Get your backend server's OAuth 2.0 client ID
✓ Add the Google Login Button	
Session 30: Web Services- File uploading and downloading	
✓ How to upload image using web services	✓ How to download image using web services
Session 31: Firebase Cloud Messaging - Simple Chat App	
✓ What is Firebase?	✓ How to use Firebase in our project
✓ Create Firebase console project	✓ Run the starter app
✓ Enable Authentication	✓ Activate Firebase Real-time Database
✓ Sent messages	✓ Receive Reengagement Notifications
Session 32: Android Media - Music Player	
✓ Designing the Audio Player Layout	✓ Writing XML for PlayList ListView
✓ Writing Class for reading MP3 files from SDcard	✓ Writing Class for PlayList ListView
✓ Forward / Backward button click events	✓ Updating SeekBar progress and Timer
Session 33: Android Camera and Gallery	
✓ Understanding Camera intent and API	✓ How to access image click by camera
✓ How to access image from gallery	
Session 34: Android Graphics - Simple Game	
✓ What is Graphics	✓ How to access 2D Graphics
Session 35: Android Project Development Guidelines & Design Patterns	
✓ Android Project and its understanding	✓ What are the design Patterns and its use
Session 36: Advance Material design	
✓ Introducing material design	✓ How to access material design in our project
Session 37: Git Hub Integration in Studio	
✓ What is Git Hub?	✓ How to integration git hub with studio

Session 38: Location & Google Maps	
✓ How to access GPS	✓ Add Google map in our project
✓ How to get Latitude and longitude	
Session 39: Data Binding & Project	
✓ Introduction to Data Binding	✓ Project in Android