Android App Training

Getting Started with Android Programming

- ❖ What is Android?
- ❖ Android Versions
- ❖ Features of Android
- ❖ Architecture of Android
- ❖ Android Devices in the Market
- ❖ The Android Market
- ❖ Obtaining the Required Tools
- ❖ Eclipse
- ❖ Android SDK
- ❖ Android Development Tools (ADT)
- ❖ Creating Android Virtual Devices (AVDs)
- ❖ Creating Your First Android Application
- ❖ Anatomy of an Android Application

Activities and Intents

- ❖ Understanding Activities
- ❖ Applying Styles and Themes to Activity
- ❖ Hiding the Activity Title
- ❖ Displaying a Dialog Window
- ❖ Displaying a Progress Dialog
- ❖ Linking Activities Using intents
- ❖ Resolving Intent Filter Collision
- ❖ Returning Results from an Intent
- ❖ Passing Data Using an Intent Object
- ❖ Calling Built-in Applications Using intents
- ❖ Understanding the Intent Object
- ❖ Using Intent Filters
- ❖ Adding Categories
- ❖ Displaying notifications

Getting to know the Android user interface

- ❖ Understanding the Components of a Screen
- ❖ Views and View Groups
- ❖ Linear Layout
- ❖ Absolute Layout
- ❖ Table Layout
- ❖ Relative Layout
- ❖ Frame Layout

- ❖ Scroll View
- ❖ Adapting to Display Orientation
- ❖ Anchoring Views
- ❖ Resizing and Repositioning
- ❖ Managing Changes to Screen Orientation
- ❖ Persisting State Information during Changes in Configuration
- ❖ Detecting Orientation Changes
- ❖ Controlling the Orientation of the Activity
- ❖ Creating the User interface Programmatically
- ❖ Listening for UI notifications
- ❖ Overriding Methods Defined in an Activity
- ❖ Registering Events for Views

Designing your user interface using views

- ❖ Basic Views
- ❖ Text View
- ❖ Button, Image Button, Edit Text, Checkbox, Toggle Button, Radio Button,
- ❖ Radio Group Views
- ❖ Progress Bar View
- ❖ Auto Complete Text View
- ❖ Picker Views
- ❖ Time Picker View
- ❖ Displaying the Time Picker in a Dialog Window
- ❖ Date Picker View
- ❖ Displaying the Date Picker View in a Dialog Window
- ❖ List Views
- ❖ List View
- ❖ Customizing the List View
- ❖ Using the Spinner View

Displaying pictures and menus with views

- ❖ Using image Views to Display Pictures
- ❖ Gallery and Image View Views
- ❖ Image Switcher
- ❖ Grid View
- ❖ Using Menus with Views
- ❖ Creating the Helper Methods
- ❖ Options Menu
- ❖ Context Menu
- ❖ Some Additional Views
- ❖ Analog Clock and Digital Clock Views
- ❖ Web View

Data Persistence

- ❖ Saving and Loading User Preferences
- ❖ Using getSharedPreferences()
- ❖ Using getPreferences()
- ❖ Persisting Data to Files
- ❖ Saving to Internal Storage
- ❖ Saving to External Storage (SD Card)
- ❖ Choosing the Best Storage Option
- ❖ Using Static Resources
- ❖ Creating and Using Databases
- ❖ Creating the DBAdapter Helper Class
- ❖ Using the Database Programmatically
- ❖ Adding Contacts
- ❖ Retrieving All the Contacts
- ❖ Retrieving a Single Contact
- ❖ Updating a Contact
- ❖ Deleting a Contact
- ❖ Upgrading the Database
- ❖ Pre-Creating the Database
- ❖ Bundling the Database with an Application

Content Providers

- ❖ Sharing Data in Android
- ❖ Using a Content Provider
- ❖ Predefined Query String Constants
- ❖ COnTenTS
- ❖ Projections
- ❖ Filtering
- ❖ Sorting
- ❖ Creating Your Own Content Providers
- ❖ Using the Content Provider

Messaging and networking

- ❖ SMS Messaging
- ❖ Sending SMS Messages Programmatically
- ❖ Getting Feedback After Sending the Message
- ❖ Sending SMS Messages Using Intent
- ❖ Receiving SMS Messages
- ❖ Updating an Activity from a BroadcastReceiver
- ❖ Invoking an Activity from a BroadcastReceiver

- ❖ Caveats and Warnings
- ❖ Sending e-Mail
- ❖ Networking
- ❖ Downloading Binary Data
- ❖ Downloading Text Files
- ❖ Accessing Web Services
- ❖ Performing Asynchronous Calls

Location-Based Services

- ❖ Displaying Maps
- ❖ Creating the Project
- ❖ Obtaining the Maps API Key
- ❖ Displaying the Map
- ❖ Displaying the Zoom Control
- ❖ Changing Views
- ❖ Navigating to a Specific Location
- ❖ Adding Markers
- ❖ Getting the Location That Was Touched
- ❖ Geocoding and Reverse Geocoding
- ❖ Getting Location Data
- ❖ Monitoring a Location

Developing Android Services

- ❖ Creating Your Own Services
- ❖ Performing Long-Running Tasks in a Service
- ❖ Performing Repeated Tasks in a Service
- ❖ Executing Asynchronous Tasks on
- ❖ Separate Threads Using Intent Service
- ❖ Communicating between a Service and an Activity
- ❖ Binding Activities to Services