Android 8.0 App Development using Kotlin

Module 1: Android Basics

- History of Android Platform
- Setting up Android SDK & Studio
- Android application building blocks
- Exploring project templates

Module 2: Android Layouts & Views

- LinearLayout
- RelativeLayout
- FrameLayout
- CoordinatorLayout
- ConstraintLayouts
- Exploring common android widget controls
- Working with Vector images
- Exploring Data Binding

Module 3: Activities, Fragments & Runtime Permissions

- Introduction to Activities
- Exploring Implicit and Explicit Intents
- Activity life cycle & dealing with rotation
- Activity navigation and data exchange
- Returning results back from target Activity
- Introduction to Fragments
- Passing arguments to fragment
- Communicate between fragments
- Creating Dialogs using DialogFragments
- Create Two Pane Master Detail application
- Adding runtime permissions to app

Module 4: Advance Android Viewsn

- Exploring Android RecyclerView
- Exploring LinearLayoutManager & GridLayoutManager
- CardView and BottomNavigationView
- Exploring ViewPager & NavigationView
- TextInputLayout, Toast and Snackbar
- Creating Custom views
- Exploring android Palette library
- Create shape, state-list and layer-list XML Drawables
- Using SearchView to search contents in Lists
- Exploring WebViews
- Create shape, state-list and layer-list XML Drawables.
- Adding custom fonts in app

- Working with Data Binding Library

Module 5: Location Tracking & Google Maps

- Setting up Google Maps
- Adding Maps using MapFragment
- Displaying markers on Map
- Customizing map markers
- Getting users current location using Fused Location Provider
- Working with GeoCoder

Module 6: Database, LiveData & Paging

- Introduction to Room Database
- Performing CRUD operations using Room
- Exploring LiveData
- Using ViewModel to persist data across activity recreation
- Picking up contacts from Contact screen
- Exploring android paging library

Module 7: Connecting to RESTful API & Push Notifications

- Introduction to HttpUrlConnection
- Asynchronously fetching data from network
- Exploring JSON data exchange format
- Using Retrofit to fetch data efficiently
- Retrofit rest adapters and interceptors
- Asynchronously load and cache images using Picasso
- Performing background work using WorkManager
- Exploring Android O Notification channels

Module 8: Exploring Storage Options

- Working with Files to Save and Retrieve data
- Using SharedPreferences and PreferenceFragment
- Saving and Restoring application state using Bundles

Module 9: Animations

- FrameAnimations
- Object Animators
- Shared Element Activity Transitions
- Spring Animations

Module 10: RxJava 2.0 & DI

- Getting started with RxJava 2.0
- Learning RxJava 2.0 Operators
- Exploring RxBindings
- Getting started with Dagger 2.0
- Building clean architecture using RxJava & Dagger

Module 11: Architecture Component, MVP , MVVM pattern

- Introduction to Android Architecture components
- Exploring MVP Design Pattern
- Exploring MVVM Design Pattern

Module 12: Testing and Distributing Android Applications

- Testing android applications using Mockito and Robolectric
- UI Automation tests using Espresso
- Testing API endpoint integration using mockWebServer
- Generating signing certificates and signing APK files
- Adding Localization to app
- Distributing Android Apps