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অ্যান্ড্রয়েড অ্যাপ ডেভেলপমেন্ট

ক্যারিয়ার ট্র্যাক

সিলেবাস

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ক্যারিয়ার ট্র্যাক

প্রথম ব্যাচের রেজিস্ট্রেশন

১০ সেপ্টেম্বর - ২৫ সেপ্টেম্বর ২০২১

রেজিস্ট্রেশন ফি

৳৭,০০০ (প্রথম ২০০ জন)
~~৳১০,০০০~~

Android App Development
Career Track

Introduction to Android

- Introduction and Brief history of Android
- Download and install Android Studio
- Watch before installing Android SDK
- Project Structure brief
- Java and Res Folder and their files
- Android Studio Usages: Android Studio Shortcuts
- Android Studio Usage Tips
- Build Gradle and Manifest: Android Build Gradle
- Android Manifest
- Coding File and Design File

Module 01
Introduction and Android Hierarchy

- Some Great Apps
- Activity Lifecycle

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Module 02
Android Views

- View and View groups
- Layouts
- Linear Layout
- Relative Layout
- Constraint Layout
- View Binding
- View Binding Part 2
- TextView
- ImageView
- Toast and Snackbar
- WebView
- Collapsing Toolbar Layout (5 Parts)
- Button, ImageButton
- FloatingActionButton

- EditText
- RadioButton
- Checkbox
- Switch
- ScrollView
- NestedScrollView
- Progressbar
- Seekbar
- Alert Dialog
- Material Dialog
- Spinner
- ViewStub
- DrawerLayout (5 Parts)
- BottomNavigationView

Module 03
Kotlin Basics

- Variables
- For loop
- While and do while loop
- List
- ArrayList
- Mutable and Immutable list
- Interface Part (2 Parts)
- Singleton Pattern and Kotlin Object
- Data class

- Open class, Sealed class
- Extension functions
- Scope Functions

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Module 04
RecyclerView

- RecyclerView
- RecyclerView Adapter (2 Parts)
- ViewHolder and LinearLayoutManager
- Grid Layout Manager
- Staggerd Grid Layout Manager

Module 05
Custom Views

- Custom Views (2 Parts)
- RoundedCornerConstraintLayout

Module 06
Fragments

- Use Of Fragment
- Fragment add , replace ,add to back stack
- Fragment Lifecycles
- BottomSheetDialogFragment
- Data Passing Between Fragments (2 Parts)
- Fragment result listener (2 Parts)

Module 07
Animation

- Animation
- Basic Animation
- Scale ,Translation Basic animations
- Value Animator and Object Animator

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Module 08
Threading and Services

- Android Threading
- Background and UI Threading
- Brodcast Receiver
- AsyncTask (3 Parts)
- Service, Intent Service
- Working with work manager (5 Parts)

Module 09
Intents and Permissions

- What is Intent
- Explicit Intent and Implicit Intent
- Permissions with Dexter
- Intent to open app (Camera) (2 Parts)
- Intents to open app (Gallery)

Module 10
Introduction to API and making HTTP requests

- What is http request
- API and RESTful API
- What is JSON
- Construction of http request (8 Parts)

Module 11
Basic Android Features

- Open camera and capture a photo (4 Parts)
- Choose a contact from contact app (5 Parts)

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Module 12
Files and Storage

- Different storages of android
- Uri
- Create a file (2 Parts)
- Delete a file
- SharedPreferences
- Scoped Storage

Module 13
Maps and Locations

- Setup Google Developer account
- Setup Android Project
- Setup Emulator (2 Parts)
- Getting Current location (2 Parts)
- Maps and Map Camera (2 Parts)
- Auto complete locations
- Distance between two points

Module 14
Android Databases

- Databases
- Create sqlite database and table
- Insert data to database
- Database operation using coroutines (2 Parts)
- Running the app
- Debug inserting data
- Read data from sqlite (3 Parts)
- Show data with sqlite and fragment result listener
- Delete data from SQLite (2 Parts)
- Update data and some good practices
- Migration with SQLite
- Room persistence library
- Writing migrations with Room

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Module 15
Shapes and Drawables

- XML Shapes
- Draw on code (2 Parts)
- SVGs and PNGs and why SVG is better
- Use of SVG and how to use SVG
- Animated Vector Drawables
- Drawable to bitmap and Vice versa

Module 16
Design Patterns

- MVVM - Model-View-ViewModel (5 Parts)

Module 17
Miscellaneous

- Introduction to Glide
- Use glide to show Image
- Get Image file from glide
- Brief about pagination
- Video play with Exo player
- Audio play with media player

Module 18
Firebase

- Firebase
- Things to start with
- Crashlytics
- Analytics
- Remote config (4 Parts)

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Module 19
Notification

- Local Notification (2 Parts)
- Setup project
- Get firebase token
- Implement firebase messaging service class
- Notification from postman when app is background or killed
- Notification when app is in foreground
- App run and test
- Notification click listener
- Debug
- About random number generate

Module 20
Kotlin Advances

- Jetpack Compose
- DataStore
- Multithreading with Coroutine
- Retrofit with coroutine
- Error Handling
- Parallel API calling

Module 21
Introduction to Git

- Why we use git
- Git install and open github account
- Basic git commands
- Git basic commands with Android Studio
- Android studio built in Git features

Module 22
Project

Project One : E-commerce

As the most trending android app, an e-commerce is a perfect example of an app which can be used to teach the A-Z of an advanced android application. By building an e-commerce app, a student can learn the basics and also a lot of advanced features of android app development which will build up necessary confidence in them. It will consists of

1. Usage of views like: Horizontal and Vertical recyclerview with multiple view type , bottom navigation view, Collapsing toolbar layout, and so on

2. http request construction with retrofit

3. Design pattern like MVVM

4. Animations like translation, rotation, scale and so on

5. Token based authentication flow

6. All the practices that are followed in modern sdlc life cycle in our country

7. Rx java and Rx Android

8. Kotlin features like scope functions, coroutines etc.

Project Two : Ride Sharing App

In this project we will build an almost clone of uber ride sharing app. As ride sharing is getting popular day by day, building an app like that will certainly put anyone ahead of time in terms of confidence and skill set. It will cover the following topic

1. Token based authentication and user management flow

2. Advance use of maps and locations

3. http request with retrofit

4. Activity, Fragment transaction and using animations in Their transition

5. Firebase database

6. Manipulation of android ui and some advance animation and draw overlay on views

Module 23
Publishing an app to Playstore

• Debug and Release apk (2 Parts)

• App bundle and why is it better than apk

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