CETPA
TRAINING | DEVELOPMENT | PLACEMENT
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CETPA INFOTECH PVT. LTD.

Curriculum Of Android

Duration: 3 Months

MODULE 1: INTRODUCTION TO ANDROID
- Overview of Android and Android SDK
- Overview of OOPS
- The Role of Java in Android
- History of Android, Versions of Android
- Android Features
- Applications and APK files
- Inter-Process Communication

MODULE 2: ANDROID ARCHITECTURE OVERVIEW
- Introduction to OS Layers
- Linux Kernel
Libraries
- Android Runtime
- Application Framework

MODULE 3: SETUP OF ANDROID DEVELOPMENT ENVIRONMENT
- System Requirements
- Configuring the Emulator
- Resources, Build Process, R class, Assets
- The Android Log and Log Cat
- The Dalvik Debug Monitor Services
- Eclipse and SDK installation, AVD creation
- Creating first Android Application
- Project Structure
- Creating, Compiling and Executing By Cmd

MODULE 4: ANDROID APPLICATION FUNDAMENTALS
- Android Application Building Blocks
- Activities, Life Cycle
- Activating Components
- Layouts and Views
- The Find By View Id Method
- Toast and web-kit and Custom Toast
- Intents and Results
- Start Activity and Related Methods
- Shutting Down Components
- Development tools, Manifest File

MODULE 5: USER INTERFACE DESIGN
- XML Layouts
- Layout parameters
- The Box Model, Gravity
- The Layout Inflator Service
- Linear Layout, Relative Layout, Frame Layout, Scroll View
- Views and Adapter

MODULE 6: WORKING WITH LISTS
- Java Collection Framework with Android
- Adapter view and subclasses
- Adapter and sub interface
- Simple Cursor and Adapter
- List View and List Adapter
- Spinner and Spinner Adapter
- Handling Item Selection
- Custom Adapters
- Expandable List View & Expandable List Adapter
- View Holder
- Recycler View

MODULE 7: MENUS
- Menus, View & Resources
- The Options and the Context Menus
- The <Menu>
- Handling Menus Selections
- The Escape from Switch/case
- Using of Dispatch Map
- Building Menus Dynamically

MODULE 8: DATA STORAGE
- Shared Preferences
- SQLite Databases
- Creating databases and using SQLite
- Querying Database-Create, Update, Delete, Insert
- Using Cursors, SQLite Open Helper
- Room Database
- DAO

MODULE 9: MULTIMEDIA
- Playing Sounds
- Managing Images
- Storage and Retrieval
- Gallery and other Image Views

MODULE 10: ANDROID TOOLS
- Android UI and Advance Java
- Dialog Box
- Splash
- Web View
- Switch
- Scroll Bar
- Toggle Buttons
- Time and Date
- Progress Bar
- Tablet
- Mobile Gallery
- Slider on Activity
- Threads and Synchronization
- Android Graphics and Multimedia
- Data Binding
- Using Java and Java Script
- OpenGL Introduction
- 3D graphics in OpenGL and other views
- Using Threads and Models
- Android Widget Development

MODULE 11: LOCATION SERVICES AND MAPS
- Location Services
- Location Notifications
- Selecting a Best Location Provider-GPS
- Finding Your Location-latitude & longitude
- Tracking Your Position.
- Creating Map -Based Activities.
- Using the Geocoder
- Using Itemized Overlay.

MODULE 12: HOW TO DESIGN AND BUILD ANDROID BASED MOBILE APPS

- Application Architectures
- Connection Types
- Synchronization
- Mobile Device Components.
- Connection Methods
- Mobile Client User Interface
- Mobile Application Development Management
- Mobile Design and Usability Factors
- User Interfaces Design and Specification
- Building Effective UI for Mobile Applications
- Managing client-server data transfer
- Social Network Using in Android (Facebook and LinkedIn)

MODULE 13: ANDRIOD MEDIA API

- Playing Audio/Video
- Media Recording
- Controlling Camera Settings
- Taking a Picture

MODULE 14: TELEPHONY MANAGER

- Reading the phone network
- Data connectivity
- SIM states
- Fetching Phone Book
- Making Phone Calls
- Controlling the Phone

MODULE 15: BLUETOOTH

- Introducing the Bluetooth Service
- Controlling the Local Bluetooth device
- Managing Bluetooth Connections
- Communication with Bluetooth
- Using a Bluetooth Headsets

MODULE 16: WI-FI

- Managing Network and Your Wi-Fi
- Monitoring and Managing Your Internet Connectivity

- Managing Active Connections
- Managing Your Wi-Fi

MODULE 17: SEARCHING WITH GOOGLE SEARCH MANAGER
- Search Yourself
- Searching for Meaning in Randomness

MODULE 18: WEB SERVICES
- Introduction to web services
- Restfull web service introduction
- Create RESTful web service in Java(JAX-RS)
- Introduction to JSON
- XML
- Retrofit
- MVVM
- LiveData
- RX Java

MODULE 19: CUSTOM TOOLS
- Custom List & Grid View
- Custom Tab Design
- Custom Multimedia
- Multilayer Expandable
- Advance Database Design

MODULE 20: FIREBASE
- Firebase Analytics
- Firebase Authentication
- Firebase Remote config
- Firebase Ad Mob
- Firebase Dynamic Link
- Firebase Invites
- Firebase Storage
- Firebase Database

MODULE 21: PAYMENT GATEWAY
- Payment Gateway integration with Paytm
- Payment Gateway integration with PayPal

MODULE 22: SPLASHSLIDER
- How to Build Intro Slider for your APP

MODULE 23: INTERIGATION
- Facebook integration
- Gmail integration
- Twitter integration

APPLICATION (TABLET AND MOBILE (BOTH) USED)

PROJECT WORK

Partners

Google Partner | Microsoft Partner | tcs iON | ERICSSON | Panasonic | C.B.S SAP Gold Partner | DDU-GKY

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