

Android Mobile Applications – eMobilis Module Overview and Criteria

This **practical, intensive Android Training Boot Camp** provides the fundamental knowledge necessary to **design and develop dynamic and robust Android Mobile Applications**. It introduces participants to Software installation and covers a brief Java overview before delving into the following concepts: UI, Intents UX, and Runtime Permissions, Splash activities and Data structures(List), JSON, Webviews and Github, UI (Fragments), Data structures (Recycler/Grid views), UI (Navigation Drawer Activities), Data structures (Card views), Google Maps API, Material Design, Sqlite Database and Room Database as well as Firebase Auth, Database and Storage. Participants will be expected to work on an Android App Project that they can present to demonstrate practical application of knowledge from the Training.

Modules

Module 1: Introducing the Android Platform:

Development Environment, Analyzing components of the Architecture

Module 2: Leveraging Application Fundamentals:

Building mobile applications, Creating activities to process user input, Implementing views, Packaging applications for deployment, Supporting asynchronous behavior, Communicating with intents

Module 3: Creating User Interfaces

Selecting visual component, Building the layout, Connecting a view to an activity, Positioning form elements, Working with resource declaration, Declaring component definitions and layouts, Handling multiple screen resolutions, Localizing applications

Module 4: Processing User Input

Communicating with the user, Creating and displaying Toast, Generating status bar notifications, Logging key application events, Interacting with the UI, Responding to user input events, Launching activities with intents, Writing Java event handlers, Generating context and option menus. Managing the activity life cycle, Integrating with the Android system, Persisting data in response to notifications

Module 5: Persisting Application Data

Selecting storage options, Contrasting internal and external storage locations, Saving application configuration with SharedPreferences, Manipulating the SQLite database, Executing queries to locate information, Specifying column selections with projections, Consuming and creating content providers, Accessing shared data resources, Addressing content providers with URIs

Module 6: Exchanging Data over the Internet

Interacting with server-side applications, Synchronizing Android devices with servers, Communicating via HTTP clients, Developing clients for web services, Connecting to RESTful services, Creating and parsing JSON

Module 7: Enhancing the User Experience

Incorporating the Action Bar, Manipulating objects with drag and drop, Supporting orientation and multiple screen resolutions with resources, Combining fragments into a multi-pane UI,

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Leveraging geolocation and mapping capabilities, Plotting positions on Google Maps, Establishing location through GPS, Cell-ID and WiFi

Learning Outcomes

- Install and configure Android Application Development Tools
- Design and develop User Interfaces for the Android platform
- Save state information across important operating system events
- Apply Java programming concepts to Android Application Development
- Understand the basic technologies used by the Android platform
- Ensuring the learner can create from scratch a fully functional mobile application
- Run an Android App on an Emulator

Trainer: eMobilis

Duration: 20 days; Monday – Friday, 9 am – 1 pm

Participants: 25

Criteria for participation:

- Applicants must be recent Bachelor or Master graduates (up to 2 years after graduation) that are unemployed and seeking a job
- Applicants must have a university degree in an ICT or Computer Science related field
- The applicant should demonstrate experience and proficiency coding in Java
- Prior coding skills in any programming language is an added advantage
- Applicants should have a GitHub Portfolio or Account to show a software project