

ELECTIVE III

Mobile Application Development

Unit-1

Introduction to Android: The Android Developing environment, Android SDK, Introduction to Open Handset Alliance, Development Framework, Application Fundamentals; Device Compatibility, System permissions, Understanding Anatomy of Android Application, Android Development Tools

Unit-II

Getting started with Mobility: Mobility Landscape, Mobile Platforms, Mobile apps development, Android terminologies, Application Context, Activities, Services, Intents, Receiving and Broadcasting Intents, Setting up the mobile apps development environment with emulator .

Unit-III

Building block of Mobile apps: App user Interface Designing, Layout, User Interface elements, VUIs and Mobile Apps, Text to Speech Techniques, Designing the Right UI, Activity states and lifecycle, Interaction among activities.

Unit-IV

Sprucing up Mobile apps: App functionality beyond user interface- Threads, sync task, Services-states and life cycle, Notifications, Broadcast receivers, Telephony and SMS APIs Native data handling: on device file I/O, shared preferences, mobile databases such as SQLite, Working with a content provider

Unit-V

Factors in Developing Mobile Applications: Mobile Software Engineering, Frameworks and Tools, Generic UI Development, Android User Graphics and Multimedia: Performance and Multithreading, Graphics and UI Performance, Android Graphics, Mobile Agents and Peer-to-Peer Architecture, Android

Unit-VI

Platforms and Additional Issues: Development Process, Architecture, Design, Technology Selection, Testing, Security and Hacking, Active Transactions, More on Security