

ANDROID COURSE CONTENTS

Prerequisite: Knowledge of Core Java Programming

Duration: 30 Working Days

- 1) Introduction to mobile environment
 - ☐ Mobile applications vs other applications
 - ☐ Types of mobile applications
 - ☐ Introduction to mobile technologies
 - ☐
- 2) Introduction to android
 - ☐ Android History
 - ☐ Android versions and their brief differences
 - ☐ Features of android
 - ☐ Future of android
 - ☐ Types of android softwares and their differences
- 3) Android software setup
 - ☐ Android sdk introduction
 - ☐ Steps for installing android sdk
 - ☐ Configuring android sdk manager
 - ☐ About Eclipse ide introduction
 - ☐ Android development tools introduction
 - ☐ Understanding android virtual device and their configuration setup
- 4) Steps to develop a first android application
 - ☐ Understanding application structure

- ☐ Starting and stopping emulator services
- ☐ Understanding types of virtual machines and their differences
- ☐ Understanding differences between dvm and jvm
- ☐ Understanding differences between garbage collector and dalvik garbage collector

- 5) Understanding apk file and dex file and their differences
- 6) Types of android applications and their differences
- 7) About layout managers
 - ☐ Need of layout managers
 - ☐ Types of layout managers in detailed with examples
- 8) Understanding android widgets
 - ☐ TextView,Button,ImageButton,EditText,CheckBox,ToggleButton,RadioButton,RadioGroup,ProgressBar,AutoCompleteTextView
 - ☐ Discussing above views indetailed with examples
 - ☐ Understanding picker views i.e TimePicker and DatePicker
 - ☐ Understanding list views types normal list view and spinner list view

- 9) About activity communication
 - ☐ Need of activity communication
 - ☐ Types of activity communications with examples

- 10) Calling Built in activities in android mobile
- 11) Steps to deploy android app into real android mobile device
- 12) Understanding notification service with a example
- 13) Understanding screen orientation and controlling with a example

- 14) About Action Bar
 - ☐ Adding action items
 - ☐ Customizing action items and icon
- 15) Steps to create user interface programmatically and its requirement
- 16) About Fragments
 - ☐ Need of fragments
 - ☐ Fragments vs activity
 - ☐ Fragment life cycle
 - ☐ Types of fragments and their differences
 - ☐ Built in fragments types and their differences
- 17) Understanding menus
 - ☐ Types of menus and their differences with examples
 - ☐ Need of menus
- 18) Understanding data persistence
 - ☐ Types of databases and their differences
 - ☐ Steps to configure each database with a example
 - ☐ External storage and internal storage examples
- 19) Content Providers
 - ☐ Types of content providers and their differences
 - ☐ Steps to use built in content providers and their needs
 - ☐ Creating and using our content provider
- 20) About Dialog boxes
 - ☐ Types of dialog boxes and their needs
 - ☐ Examples for each dialog box in detail
- 21) Understanding broadcasting
 - ☐ Using intents to broad cast events

- ☐ Listening broadcast with broadcast receivers
- ☐ Understanding ordered intents broadcasting
- ☐ Understanding sticky intents broadcasting
- ☐ Understanding pending intents
- 22) Understanding services
 - ☐ Services vs activities
 - ☐ Steps to create and controlling services
 - ☐ Integrating service to activity
 - ☐ Creating foreground services
- 23) Understanding background threads
 - ☐ Understanding asynchronous thread and their differences
 - ☐ Creating a new task with example
- 24) Working with alarm service
- 25) Understanding speech recognition
 - ☐ Speech recognition for input
 - ☐ Speech recognition for search
- 26) About animations
 - ☐ Tweened view animations and property animations and their differences
 - ☐ Understanding animation listeners
 - ☐ Understanding canvas drawing
 - ☐ Introducing surface view and when to use it
 - ☐ Creating 3d views with a surface view
- 27) Understanding touch screen and working with a touch events with a examples
- 28) Understanding web services and their needs and how to consume webservice using json in detail realtime examples