



ADVANCED COURSE IN **ANDROID APP DEVELOPMENT**



**ASIAN INSTITUTE OF DIGITAL
MARKETING**

<http://www.aidm.org.in>



Android App Development Course

Module 1 – OVERVIEW

- What is Android?
- Features of Android
- Android Applications

Module 2 – ENVIRONMENT SETUP

- Step 1 - Setup Java Development Kit (JDK)
- Step 2 - Setup Android SDK
- Step 3 - Setup Eclipse IDE
- Step 4 - Setup Android Development Tools (ADT) Plugin
- Step 5 - Create Android Virtual Device

Module 3 – ARCHITECTURE

- Linux kernel
- Libraries
- Android Runtime
- Application Framework
- Applications

Module 4 – APPLICATIONS COMPONENT

- Activities
- Services
- Broadcast Receivers
- Content Providers
- Additional Components

Module 5 – HELLO WORLD EXAMPLE

- Create Android Application
- Anatomy of Android Application
- The Main Activity File
- The Manifest File
- The Strings File
- The R File
- The Layout File
- Running the Application

Module 6 – ORGANIZING & ACCESSING THE RESOURCES

- Organize Resources
- Alternative Resources
- Accessing Resources
- Accessing Resources in Code
- Accessing Resources in XML

Module 7 – ACTIVITIES

Module 8 – SERVICES



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Module 9 – Broadcast receivers

- Creating the Broadcast Receiver
- Registering Broadcast Receiver
- Broadcasting Custom Intents

Module 10 – CONTENT PROVIDERS

- Content URIs
- Create Content Provider

Module 11 – FRAGMENTS

- Fragment Life Cycle
- How to use Fragments?

Module 12 – INTENTS & FILTERS

- Intent Objects
- Action
- Data
- Category
- Extras
- Flags
- Component Name
- Types of Intents
- Explicit Intents
- Implicit Intents
- Intent Filters

Module 13 – UI LAYOUTS

- Android Layout Types
- Layout Attributes
- View Identification

Module 14 – UI CONTROLS

- Android UI Controls
- Create UI Controls

Module 15 – EVENT HANDLING

- Event Listeners & Event Handlers
- Event Listeners Registration
- Event Handling Examples
- Registration Using the Activity Implements Listener Interface
- Registration Using Layout file activity_main.xml
- Exercise

Module 16 – STYLES & THEMES

- Defining Styles
- Using Styles
- Style Inheritance
- Android Themes
- Default Styles & Themes



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Module 17 – CUSTOM COMPONENTS

- Creating a Simple Custom Component
- Instantiate using code inside activity class
- Instantiate using Layout XML file
- Custom Component with Custom Attributes

Module 18 – DRAG & DROP

- The Drag/Drop Process
- The DragEvent Class
- Listening for Drag Event
- Starting a Drag Event

Module 19 – NOTIFICATIONS

- Create and Send Notifications
- The NotificationCompat.Builder Class
- Big View Notification

Module 20 – LOCATION-BASED SERVICES

- The Location Object
- Get the Current Location
- Get the Updated Location
- Location Quality of Service
- Displaying a Location Address
- Install the Google Play Services SDK
- Create Android Application

Module 21 – SENDING EMAIL

- Intent Object - Action to send Email
- Intent Object - Data/Type to send Email
- Intent Object - Extra to send Email

Module 22 – SENDING SMS

- Using SmsManager to send SMS
- Using Built-in Intent to send SMS
- Intent Object - Action to send SMS
- Intent Object - Data/Type to send SMS
- Intent Object - Extra to send SMS

Module 23 – PHONE CALLS

- Intent Object - Action to make Phone Call
- Intent Object - Data/Type to make Phone Call



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Module 24 – PUBLISHING ANDROID APPLICATION

- Export Android Application
- Google Play Registration

Module 25 – ALERT DIALOG TUTORIAL

Module 26 – ANIMATIONS

- Tween Animation
- Zoom in animation

Module 27 – AUDIO CAPTURE

Module 28 – AUDIO MANAGER

Module 29 – AUTOCOMPLETE

Module 30 – BEST PRACTICES

- Best Practices - User input
- Best Practices - Performance
- Best Practices - Security and privacy

Module 31 – BLUETOOTH

Module 32 – CAMERA

- Using existing android camera application in our application
- Directly using Camera API Provided by Android in our Application

Module 33 – CLIPBOARD

- Copying data
- Pasting data

Module 34 – CUSTOM FONTS

Module 35 – DATA BACKUP

- Test your BackupAgent

Module 36 – DEVELOPER TOOLS

- SDK tools
- Android
- DDMS
- Capturing ScreenShot
- Sqlite3
- Platform tools



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Module 37 – EMULATOR

- Creating AVD
- Creating Snapshots
- Changing Orientation
- Emulator Commands
- Emulator - Sending SMS
- Emulator - Making Call
- Emulator - Transferring files

Module 38 – FACEBOOK INTEGRATION

- Integrating Facebook SDK
- Intent share

Module 39 – GESTURES

- Handling Pinch Gesture

Module 40 – GOOGLE MAPS

- Adding Google Map
- Customizing Google Map
- Integrating Google Maps
- Download and configure. Google Play Services SDK
- Obtaining the API key
- Specify Android Manifest Settings
- Adding Google Maps to your application

Module 41 – IMAGE EFFECTS

Module 42 – IMAGE SWITCHER

Module 43 – INTERNAL STORAGE

- Writing file
- Reading file

Module 44 – JETPLAYER

- Using JetCreator
- Verifying Results

Module 45 – JSON PARSER

- JSON - Elements
- JSON - Parsing

Module 46 – LINKEDIN INTEGRATION

- Integrating LinkedIn SDK
- Intent share

Module 47 – LOADING SPINNER



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Module 48 – LOCALIZATION

- Localizing Strings

Module 49 – LOGIN SCREEN

Module 50 – MEDIA PLAYER

Module 51 – MULTITOUCH

Module 52 – NAVIGATION

- Providing Up Navigation
- Handling device back button

Module 53 – NETWORK CONNECTION

- Checking Network Connection
- Performing Network Operations

Module 54 – NFC GUIDE

- How It Works:
- How it works with Android:
- Future Applications

Module 55 – PHP/MYSQL

- PHP - MYSQL
- Android - Connecting MYSQL

Module 56 – PROGRESS CIRCLE

Module 57 – PROGRESS BAR USING PROGRESS DIALOG

Module 58 – PUSH NOTIFICATION

Module 59 – RENDERSRIPT

- How RenderScript Works
- How to Begin

Module 60 – RSS READER

- RSS Example
- RSS Elements
- Parsing RSS

Module 61 – SCREEN CAST

- Screen Cast Steps

Module 62 – SDK MANAGER

- Running Android SDK Manager
- Recommended
- Enabling Proxy in Android SDK Manager
- Adding New Third Party Sites



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Module 63 – SENSORS

- Getting list of sensors supported

Module 64 – SESSION MANAGEMENT

- Shared Preferences
- Session Management through Shared Preferences

Module 65 – SIP PROTOCOL

- Applications
- Requirements
- SIP Classes
- Functions of SIP
- Components of SIP
- UAC
- UAS
- SipManager

Module 66 – SPELLING CHECKER

Module 67 – SQLITE DATABASE

- Database - Package
- Database - Creation
- Database - Insertion
- Database - Fetching
- Database - Helper class

Module 68 – SUPPORT LIBRARY

- Support Library Features
- Downloading the Support Libraries

Module 69 – TESTING

- Test Structure
- Testing Tools in Android
- JUnit
- Monkey

Module 70 – TEXT TO SPEECH

Module 71 – TEXTURE VIEW

Module 72 – TWITTER INTEGRATION

- Integrating Twitter SDK
- Intent share

Module 73 – UI DESIGN

- UI screen components
- Understanding Screen Components
- Units of Measurement
- Screen Densities
- Optimizing layouts



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Module 74 – UI PATTERNS

- UI Patterns components
- Action Bar
- Confirming and Acknowledging
- Settings
- Help
- Selection

Module 79 – XML PARSER

- XML - Elements
- XML - Parsing

Module 80 – LIVE PROJECT

Module 75 – UI TESTING

- uiautomatorviewer
- uiautomator

Module 76 – WEBVIEW

Module 77 – WI-FI

Module 78 – WIDGETS

- Widget - XML file
- Widget - Layout file
- Widget - Java file
- Widget - Manifest file



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