

## Android Application Training-Cum-Placement Program

### Day-wise Course Curriculum

Day	Topic	Sub-Topics
1	Android Overview and History	<ul style="list-style-type: none"> <li>✓ How it all got started</li> <li>✓ Why Android is different (and important)</li> </ul>
	Android Stack	<ul style="list-style-type: none"> <li>✓ Overview of the stack</li> <li>✓ Linux kernel</li> <li>✓ Native libraries</li> <li>✓ Dalvik</li> <li>✓ App framework</li> <li>✓ Apps</li> </ul>
	SDK Overview	<ul style="list-style-type: none"> <li>✓ Platforms</li> <li>✓ Tools</li> <li>✓ Versions</li> </ul>
	Hello World App	<ul style="list-style-type: none"> <li>✓ Creating your first project</li> <li>✓ The manifest file</li> <li>✓ Layout resource</li> <li>✓ Running your app on Emulator</li> </ul>
2	Main Building Blocks	<ul style="list-style-type: none"> <li>✓ Activities</li> <li>✓ Activity lifecycle</li> <li>✓ Intents</li> <li>✓ Services</li> <li>✓ Content Providers</li> <li>✓ Broadcast Receivers</li> </ul>
3	Basic Android User Interface	<ul style="list-style-type: none"> <li>✓ XML versus Java UI</li> <li>✓ Dips and sps</li> <li>✓ Views and layouts</li> <li>✓ Common UI components</li> <li>✓ Handling user events</li> </ul>
4	Android System Overview	<ul style="list-style-type: none"> <li>✓ File System</li> <li>✓ Preferences</li> <li>✓ Notifications</li> <li>✓ Security model</li> </ul>
	Advanced UI	<ul style="list-style-type: none"> <li>✓ Selection components</li> <li>✓ Adapters</li> <li>✓ Complex UI components &amp; Layouts</li> <li>✓ Building UI for performance</li> <li>✓ Menus and Dialogs</li> <li>✓ Graphics &amp; animations</li> </ul>
5	Multimedia in Android	<ul style="list-style-type: none"> <li>✓ Multimedia Supported audio formats</li> <li>✓ Simple media playback</li> <li>✓ Supported video formats</li> <li>✓ Simple video playback</li> </ul>
6	SQL Database	<ul style="list-style-type: none"> <li>✓ Introducing SQLite</li> <li>✓ SQLiteOpenHelper and creating a database</li> <li>✓ Opening and closing a database</li> <li>✓ Working with cursors Inserts, updates, and deletes</li> </ul>
7	Basic Content Providers	<ul style="list-style-type: none"> <li>✓ Content provider MIME types</li> <li>✓ Searching for content</li> <li>✓ Adding, changing, and removing content</li> <li>✓ Working with content files</li> </ul>
8	Custom Content Providers	<ul style="list-style-type: none"> <li>✓ Why Content Providers</li> <li>✓ Where the content comes from</li> <li>✓ Implementing the API Supporting content files</li> </ul>
9	Location Services	<ul style="list-style-type: none"> <li>✓ Working with the Location Manager</li> <li>✓ Working with Google Maps extensions</li> </ul>
10	Services	<ul style="list-style-type: none"> <li>✓ Overview of services in Android</li> <li>✓ Implementing a Service</li> <li>✓ Service lifecycle</li> <li>✓ Bound versus unbound services</li> </ul>

11	Broadcast Receivers	<ul style="list-style-type: none"> <li>✓ What are Broadcast Receivers</li> <li>✓ Implementing broadcast receiver</li> <li>✓ System broadcasts and how to use them</li> </ul>
12	Intent Filters	<ul style="list-style-type: none"> <li>✓ Role of filters</li> <li>✓ Intent-matching rules</li> <li>✓ Filters in your manifest</li> <li>✓ Filters in dynamic Broadcast Receivers</li> </ul>
13	Networking	<ul style="list-style-type: none"> <li>✓ Working with web services</li> <li>✓ Best practices</li> </ul>
14	Sensors(Accelerator)	<ul style="list-style-type: none"> <li>✓ How Sensors work</li> <li>✓ Listening to Sensor readings</li> <li>✓ Best practices for performance</li> </ul>
	Wi-Fi	<ul style="list-style-type: none"> <li>✓ Monitoring and managing Internet connectivity</li> <li>✓ Managing active connections</li> <li>✓ Managing Wi-Fi</li> </ul>
15	Telephony	<ul style="list-style-type: none"> <li>✓ Making calls</li> <li>✓ Monitoring data connectivity and activity</li> <li>✓ Accessing phone properties and status</li> <li>✓ Controlling the phone</li> </ul>
16	Camera	<ul style="list-style-type: none"> <li>✓ Taking pictures</li> <li>✓ Rendering previews</li> </ul>
17	Bluetooth	<ul style="list-style-type: none"> <li>✓ Controlling local Bluetooth device</li> <li>✓ Discovering and bonding with Bluetooth devices</li> <li>✓ Managing Bluetooth connections</li> <li>✓ Communicating with Bluetooth</li> </ul>
18	Automated Testing	<ul style="list-style-type: none"> <li>✓ Why automate tests</li> <li>✓ Instrumentation and unit testing</li> </ul>
19 - 20	Building the native library	<ul style="list-style-type: none"> <li>✓ Java interface</li> <li>✓ Native library implementation</li> <li>✓ Headers and global variables</li> <li>✓ Calling Java functions from Java and native threads</li> <li>✓ Implementation of other native functions</li> <li>✓ The JNI OnLoad() function implementation</li> <li>✓ Building the native library</li> </ul>
21 - 25	<p><b>Hand-on Practice – Build SMSReplier Application</b></p> <p>SMS Replier takes advantage of the smart phone's built-in GPS functionality, and automatically knows when the user's vehicle is moving at a speed greater than 15 miles per hour. The application's GPS integration, when enabled, will automatically trigger a text message response whenever a call or text message arrives; at that time, callers receive an immediate text response using the default reply of "I'm Driving, I'll call or text you back as soon as I come to my destination." message. Users can also enter in their own customized response messages.</p> <p>In addition to the handy Texting-While-Driving integration that automatically tells the app when you're driving, users can also set their mobile phones on auto-respond for a predetermined period of time to accommodate other situations. If you're at the movies for example, you don't have to worry about missing a call-just 1-click an auto-response that says, "I'm at the movies, I'll call/text you later." SMS Replier comes with up to 52 pre-set convenience customizable/personalizable messages that are useful in a variety of circumstances, allowing you to automatically select easy text responses such as "in class", "in meeting", or "busy."</p>	

**NOTE:**

- Within the above structure, the day-wise contents will be suitably modified to give the best learning experience for the participants.