



Android Development Workshop Course Content

Techfest is the annual science and technology festival of IIT Bombay. Following is the basic outline of the **in-person** workshop that would be happening at **Techfest in IIT Bombay**

Session 1

Introduction to Android technology
Structure of Android applications

Students will install the SDK Tools, Eclipse, and other Tools or Android Studio as feasible for the session.

- Students will be informed well in advance with the installation process.
- Students will get ready to develop by creating an Android virtual device and setting an Android Device.
- Starting with Manifest

Session 2

Working with Activities

- Creating Skelton Application
- Using XML based layouts
- Using Basic Widgets
- Working with Containers
- Using Selection Widgets
- Applying Menus and Fonts
- Showing Pop-up Messages
- Dealing with Threads
- Handling Activity Lifecycle events

By this time the students will be able to develop the simple buttons, menu box, how to create a toast, pop up messages, etc and other basic structures of the app.

Session 3

Intents

- Create Intent Filters
- Launching Activities
- Introspection with action
- Handling Rotation



Session 4

Data stores, Network services and APIs

- Setting Preferences
- Accessing the Files
- Working with Resources
- Managing Local Databases
- Communicating with Internet

Students will learn how to create databases and connect your app to the internet.

Session 5

Content Provider and services

- Using a Content Provider
- Creating a Content Provider
- Managing Permissions
- Creating and Using the Services
- Creating Alerts with Notifications

Students will learn to set permissions for apps that are needed by the user.

Session 6

Telephony and SMS

- How to send an automated message using your App to the user.

Audio, Video and using the Camera

- Students will learn to use the media player / Camera.
- Sample activity is creating a Media player to play audio/video songs.

Publishing your App.