



# Java<sup>TM</sup>

## Android + JAVA<sup>TM</sup>

A 15 days program on  
Android Application Development with  
Brushing of JAVA including one major project

*A Place for Innovative Minds!!!*

Workshop Designed & Conceptualized by



## Training Courseware

We will provide following benefits to the college:-

### Explaining Java Technology

- Describe key concepts of the Java programming language
- List the three Java technology product groups
- Summarize each of the seven stages of the product life cycle

### Analyzing a Problem and Designing a Solution

- Analyze a problem using object-oriented analysis
- Design classes from Which object will be created

### Developing and Testing a Java Technology Program

- Identify the four components of a class in the Java programming language
- Use the main method in a test class to run a Java technology program from the command line
- Compile and execute a Java technology program

### Declaring, Initializing, and Using Variables

- Identify the use the syntax for variables and define the syntax for a variable
- List the eight Java programming language primitive data types
- Declare, initialize, and use variables and constants according to Java programming language guidelines and coding standards
- Modify variable values using operators Use promotion and type casting

### Creating and Using Objects *A Place for Innovative Minds!!!*

- Declare, instantiate, and initialize object reference variables
- Compare how object reference variables are stored in relation to primitive variables
- Use a class (the String class) included in the Java Software Developer Kit (SDK)
- Use the Java 2 Platform, Standard Edition (J2SE[™]) class library specification to learn about other classes in this application programming

### Using Operators and Decision Constructs

- Identify relational and conditional operators
- Create if and if/else constructs
- Use the switch construct

## Using Loop Constructs

- Create while loops
- Develop for loops
- Create do/while loops

## Developing and Using Methods

- Describe the advantages of methods and define worker and calling methods
- Declare and invoke a method
- Compare object and static methods
- Use overloaded methods

## Implementing Encapsulation and Constructors

- Use encapsulation to protect data
- Create constructors to initialize objects

## Creating and Using Arrays

- Code one-dimensional arrays
- Set array values using length attribute and a loop
- Pass arguments to the main method for use in a program
- Create two-dimensional arrays

## Implementing Inheritance

- Define and test your use of inheritance
- Explain abstraction
- Explicitly identify class libraries used in your code

## Introduction to Android

- Internet users and Mobile phone users
- Open Handset Alliance (OHA)
- What is Android?
- History of Android
- Introduction to Android platform
- Android source code structure – packages, external libraries, default apps
- Android development options – Eclipse, Android SDK, Android NDK

## Getting to know your Android development environment

- Downloading Android SDK
- Adding ADT-Plugin
- Setting the Android environment
- What is Android made of

## Project Structure

- Root Contents
- Project Files
- The Manifest
- Writing your first Android application
- The Activity
- Part of activity
- Building ,Running and debugging your Application
- Working with Android Simulator
- Test your application on device
- Using XML – based Layout
- What is an XML –Based Layout?
- Why use an XML – Based Layout?
- How does it work
- Building custom view and layout

## Services

- Creating a Service
- Parts of Service
- Implementing a Service
- Implementing a Interface
- Modifying your Manifest's file
- Invoking a Service
- Connecting to a Service

## User Interface

- Building a User Interface
- Overview of Android 's view structure
- Android built –in layout
- Android built in Views
- Event Handling
- Using basic Widget
- Labels
- Button
- Images
- Radio and Check buttons

- Working and Using Containers
- Concepts and Properties
- Using Menus Using Pop –up messages

## Intents

- Creating Intent Filters
- What is an Intent Filters
- Parts Intent Routing
- Narrow Receivers

## Content Providers

- Using a Content Providers
- What is a Content Providers
- Making queries
- Handling a Content Providers
- Building a Content Providers
- Database Content Provider
- Content Observer

## Preferences, Files and Data stores in Android

- SQLite Databases usage and running SQL query from Application
- Data Stores
- Overview of storing, retrieving, and exposing data
- Preferences
- Files
- Managing and Accessing Local Databases
- Data access over the network
- Single Sign on and Sync.
- Account Management
- Sync Adaptors
- Parts
- Properties

## Media APIs

- Android Media API
- Playing audio/video
- Media recording

## Advance Operations with Android

- Accessing Location based Services
- Mapping with Map View and Map Activity



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We ensure that you will find our training programs extremely beneficial for your students. If you have any queries kindly get back to us. We are looking forward to a quick and positive response from you and a long term association with your esteemed organization.

Thanks & Regards,

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