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TAN DUC INFORMATION TECHNOLOGY SCHOOL JSC

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ANDROID CERTIFIED ASSOCIATE DEVELOPER (ACAD)

Duration: 05 days (Instructor-Led)

This workshop is a hands-on guide to designing and building mobile applications using Google's Android open-source platform. The course explains what Android is, the Android SDK, all essential features, as well as the advanced capabilities and APIs such as background services and notifications. This complete hands-on workshop encourages participants to learn by building a real-life working application, which can serve as a basis for their future Android projects. By the end of the course, each participant will have a complete functional Android application incorporating most of the key features of the platform.

TARGET AUDIENCE

This workshop is intended for software developers interested in developing applications for Android mobile phones supporting popular Android versions.

PREREQUISITES

All participants should know the fundamental of object oriented programming using JAVA, candidate should be familiar with basic Java SE 1.7++ (classes, control flow statements, instantiation, inheritance, initialization, assignment, method overloading and overriding etc).

OBJECTIVES

Upon completion of this course, you will be able to:

- Build your own applications for Android mobile phones.
- Understand how Android applications work, Android application components, manifest, and Intent.
- Design Android applications with compelling user interfaces by using and creating your own layouts using external resources.
- Use Android Web APIs for accessing Web Services such as Twitter etc. in background services
- Take advantage of Android APIs for data storage and retrieval via user preferences, files and local databases.
- Utilize the powerful Android API on maps, speech, medias and hardware to build complex applications
- Debug, test and deploy your own applications on Google Play Store.

COURSE OUTLINE

DAY 1

Guidance Introduction

- What is Android?
- Android Architecture
- Android Version and Distribution
- Knowledge Check

Android Development Environment

- System requirements
- Workflow
- Demo Development Environment Setup

- Unpacking SDK ADT Bundle
- Installing and Updating SDK
- Creating AVD
- Connecting a Mobile Device
- Knowledge Check
- Lab Activity 1

Android App Development

- Demo App Development
- Assigning ID
- Size, Padding and Margins
- Project Structure
- Android Activity
- Activity Life Cycle
- Knowledge Check
- Lab Activity 2
- First App Source Code

Android UI

- UI layout
- Android Common Layout#
- Demo Layouts and Widgets Manipulation
- Knowledge Check

Handling UI Widgets Input Events

- OnClickListener
- Image View
- ImageButton
- EditText
- CheckBox
- Flipper
- Knowledge Check
- Lab Activity 3

DAY 2

Widgets

- Selection Widgets
- Adapter
- ListView
- Spinner
- GridView
- Gallery

- HorizontalScrollView
- AutoCompleteTextView
- Knowledge Check
- Lab Activity 4

Toast, Dialogs and Notifications

- Toast
- Custom Toast
- Dialog
- Notification
- Knowledge Check
- Lab Activity 5

DAY 3

Other User Interface

- Option Menu and Action Bar
- Context Menu
- Knowledge Check

Intent

- Passing Data
- Sharing using Intent
- Sharing using Intent chooser
- Sharing with specific package
- Knowledge Check
- Lab Activity 6 AsyncTask Internet Connection
- WebView
- HttpGet
- HttpPost
- HttpURLConnection
- Knowledge Check

Persistent application data

- Shared Preferences
- File Resources
- SQLite Database
- Knowledge Check
- Lab Activity 7

DAY 4

Location Service

- Location
- Map
- GeoCoding
- Reverse GeoCoding
- Knowledge Check

Speech

- Text to Speech
- Speech Recognizer
- Knowledge Check
- Lab Activity

Multitouch

- Motion Event
- Multi Touch

Media

- Media Player
- Media Recorder
- Image Capture
- Video Capture

DAY 5

Sensor

- Accelerometer
- Proximity
- Gyroscope

Vibration Telephony

- Making a Call
- Sending SMS
- Telephony State

Publishing

- Registering
- Signing
- Application Version
- Package naming
- Google Play
- 3rd Party Market

Android Certified Associate Developer (ACAD)

Exam Format

Format: Multiple Choice based questions Duration: 2 hours

Total Questions: 50

Passing Score: 70%

ABOUT ITRAIN ASIA – CERTIFICATION BODY

iTrain Asia Pte. Ltd. with its headquarters in Singapore and branch office in Malaysia and Indonesia is a Tech Certification Body that provides Digital Tech certification exams, course materials and also trainings via its Authorized Training Partners (ATP). Its certifications are currently being rolled out to Individuals, Corporates and also Universities throughout 16 countries in Asia.

- Android Certified Associate Developer (ACAD)
- iOS Certified Associate Developer (ICAD)
- Certified Data Science Specialist (CDSS)
- Certified IoT Specialist (CIoTS)
- Certified Digital Marketing Specialist (CDMS)
- Fintech Foundation Certificate (FFC)

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