uCertify

Course Outline

Android Programming With Android Studio for Beginners



28 Mar 2024

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1. Course Objective

The Beginning Android Programming With Android Studio course and lab is designed for Android developers who want to start developing applications using Google's Android SDK. The lab can be mapped to any course, textbook, or training, therefore, adding value and a hands-on component to training. The Android Programming course covers the necessary topics to help you understand the underlying architecture of the SDK and to appreciate why things are done in certain ways.

2. Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

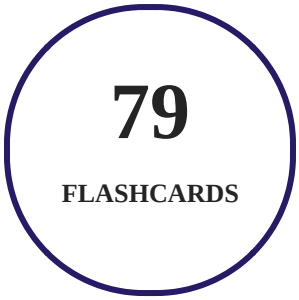
3. Quizzes

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.



4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.



6. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

7. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

8. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

9. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution

2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform
    2. Best Instructional Solution in Other Curriculum Areas
    3. Best Learning Relationship Management Solution

- **2019**
    1. Best Virtual Learning Solution
    2. Best Content Authoring Development or Curation Solution
    3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

10. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Introduction

- Who This Book Is For
- What This Book Covers
- How This Book Is Structured
- What You Need to Use This Book
- Conventions

Chapter 2: Getting Started with Android Programming

- What Is Android?

- Obtaining the Required Tools
- Launching Your First Android Application
- Summary

Chapter 3: Using Android Studio for Android Development

- Exploring the IDE
- Using Code Completion
- Debugging Your Application
- Publishing Your Application
- Summary

Chapter 4: Activities, Fragments, and Intents

- Understanding Activities
- Linking Activities Using Intents
- Fragments
- Displaying Notifications
- Summary

Chapter 5: Getting to Know the Android User Interface

- Understanding the Components of a Screen
- Adapting to Display Orientation
- Managing Changes to Screen Orientation
- Utilizing the Action Bar
- Creating the User Interface Programmatically
- Listening for UI Notifications
- Summary

Chapter 6: Designing Your User Interface with Views

- Using Basic Views
- Using Picker Views
- Using List Views to Display Long Lists
- Understanding Specialized Fragments
- Summary

Chapter 7: Displaying Pictures and Menus with Views

- Using Image Views to Display Pictures
- Using Menus with Views

- Using WebView
- Summary

Chapter 8: Data Persistence

- Saving and Loading User Preferences
- Persisting Data to Files
- Creating and Using Databases
- Summary

Chapter 9: Content Providers

- Sharing Data in Android
- Using a Content Provider
- Creating Your Own Content Providers
- Using the Content Provider
- Summary

Chapter 10: Messaging

- SMS Messaging
- Sending Email

- Summary

Chapter 11: Location-Based Services

- Displaying Maps
- Getting Location Data
- Monitoring a Location
- Summary

Chapter 12: Networking

- Consuming Web Services Using HTTP
- Consuming JSON Services
- Summary

Chapter 13: Developing Android Services

- Creating Your Own Services
- Establishing Communication Between a Service and an Activity
- Binding Activities to Services
- Understanding Threading
- Summary

Chapter 14: Video Tutorials

- Getting Started with an Android Phone
- Brief Introduction to an Android Phone
- Android Screen
- Using Stylus with an Android Phone
- Android Camera
- Using Gestures to Interact with an Android Phone
- Using Keypad to Interact with an Android Phone
- Contacts in an Android Phone
- Messaging in an Android Phone
- Getting Connected to the Internet
- Getting Started with an Email Application in an Android Phone
- Music App
- WrapUp

Videos and How To

uCertify course includes videos to help understand concepts. It also includes How Tos that help learners in accomplishing certain tasks.

31	04:22
VIDEOS	HOURS

11. Practice Test

Here's what you get

30	30
PRE-ASSESSMENTS QUESTIONS	POST-ASSESSMENTS QUESTIONS

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

12. LABS

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Getting Started with Android Programming

- Opening an Existing Database

Using Android Studio for Android Development

- Using the Code Completion Tool
- Debugging an Application
- Publishing an Application

Activities, Fragments, and Intents

- Understanding the Life Cycle of an Activity
- Applying Styles and Themes to an Activity
- Hiding the Activity Title
- Displaying a Dialog Window
- Displaying a Progress Dialog Window
- Passing Data Using an Intent Object

- Linking Activities Using Intents
- Returning Results from an Intent
- Using Fragments
- Adding Fragments During Runtime
- Understanding the Life Cycle of a Fragment
- Communicating Between Fragments
- Understanding the Intent Object
- Displaying Notifications on the Status Bar

Getting to Know the Android User Interface

- Placing a TextView Within a FrameLayout
- Using TableLayout
- Using RelativeLayout
- Using FrameLayout
- Using ScrollView
- Adapting to Display Orientation
- Anchoring Views in the Android App
- Understanding the Activity Behavior When Orientation Changes
- Showing and Hiding the Action Bar
- Adding Action Items to the Action Bar
- Creating the UI Via Code

Designing Your User Interface with Views

- Handling View Events
- Using the ProgressBar View
- Using the AutoCompleteTextView
- Using the TimePicker View
- Using a Dialog to Display the TimePicker View
- Using the DatePicker View
- Displaying a Long List of Items Using the ListView
- Enabling Filtering and Multi-Item Support in the ListView
- Storing Items in the strings.xml File
- Checking Which Items Are Selected

- Using the SpinnerView to Display One Item at a Time
- Creating and Using a List Fragment
- Creating and Using a Preference Fragment
- Creating and Using a Dialog Fragment

Displaying Pictures and Menus with Views

- Using the Image View
- Using the ImageSwitcher View
- Using the GridView View
- Creating the Menu Helper Methods
- Displaying an Options Menu
- Displaying a Context Menu
- Using the WebView View

Data Persistence

- Saving Data to Internal Storage
- Saving Data to External Storage
- Creating the DBAdapter Helper Class
- Adding Contacts to a Table
- Retrieving All Contacts from a Table
- Retrieving a Contact from a Table
- Updating a Contact in a Table
- Deleting a Contact from a Table

Here's what you get

61	63	29
LABS		

13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

GET IN TOUCH:

3187 Independence Drive
Livermore, CA 94551,
United States

+1-415-763-6300

support@ucertify.com

www.ucertify.com