

Android Development Certification Course

Course#:MA-01
Duration:5 Days
Price:800.00

Course Description

Since its inception in 1998, Google has revolutionised the way we live in myriad ways. New technologies like the search engine, Gmail, Google Docs and Google Maps have given us access to real-time information at our fingertips, and connected the world like never before. One of the most significant technologies that were introduced by Google is its mobile operating system, Android. With 5 million organizations, 50 million users and more being added each day, Googles Android is the undisputed leader in the app market.

Statista recorded 21.3 billion apps download from Google Store generating 40 million US dollars revenue as of August 2019 and it is projected to generate over 935 billion dollars in the year 2023. The rise of free apps supported by advertisements and in-app purchases has led to the exponential increase in Android apps and Android game developers alike. Companies like Gameloft and Rovio that have developed popular apps, Grand Theft Auto and Angry Birds have made billions of dollars by developing Android-based gaming apps.

According to Statista, the Android market share was 23.21% in 2012 and went up to 75.16% by Dec 2018. This is a testament that Android developers with the right set of skills and knowledge of the Android development tool kit are in demand. If you want to embark on a career in the app world or want to learn a new skill, then this is the right time and right career to invest in for a lucrative future.

Objectives

What youll learn

1. Learn the Basics

Basic concepts of Android development tools like Eclipse, Android Studio, DDMS, Drawables,

Listeners Screen reader support enabled.

2. User Experience

The use of Audio, Video, Services, and Notifications to enhance the user experience.

3. Publish Apps

Learn to create a working application which can be published on Google Play.

4. Android Tools

The use of Android development tools like Eclipse, Android Studio, DDMS, Drawables, Listeners

5. Learn to Use Layouts

How to use different Layouts and Widgets

6. Learn SQLite

Understand how to create applications using SQLite database

7. Build Apps

Knowledge of Android SDK to build your very own apps

Audience

Web /iOS developers

Software Developers

Mobile App Developer

Android Developer

Mobile Developer

Testers

Design Phase

Development Phase

Professionals who want to pursue a career in Android app development

Prerequisites

Although there are no specific prerequisites to attend Android Development training, the candidate is recommended to have a basic knowledge of programming languages like Java, CSS, and HTML.

Content

Get started with Java

Learning Objective:

Learn and practice the core fundamentals of Java data and manipulating that data. We will focus on the creation and understanding of the data itself and we will see how to manipulate and respond it. We will also quickly recap about Java, and then dive into learning how to write our very own Java code. The principles we are about to learn are not limited to Java but are also applicable to other programming languages as well. By the end of this module, you will be comfortable writing Java code that creates and uses data within Android.

Packages, classes and running your first program

Variables, Literals and Constants

Reading input from the user- The Scanner class

Introduction to Decision Structures - Operators and Expressions

If, if-else, if-else-if, nested if and logical operators

Comparing Strings

The Switch-Statement
Introduction to Loops
Useful Loop Calculations - Input Validation and a User Controlled Loop
Working with Files
Introduction to Arrays
Comparing and Copying Arrays
Highest and Lowest values / Sum and Average
Arrays with Files and String arrays
The ArrayList class
Classes And Objects

Hands-on:

Write Java code using packages and classes. Implement conditional statements and also use arrays in your code.

Setting up Development Environment

Learning Objective:

Here we will look at what is so great about Android, what exactly Android and Java are, how they work and complement each other, and what that means to us as future developers. Moving quickly on, we will set up the required software so we can build and deploy a simple app.

Introduction to Android
Installing Android Studio
Introduction to Android Studio
Activity Lifecycle
Building Hello World app
Android Virtual Devices
Exploring the Structure of an Android Application
Fundamental Components

Application Life Cycle

Hands-on:

Use various components to explore Android Studio and build basic applications.

Building Block, User Interface and Controls

Learning Objective:

Learn how to use Android Studio UI Designer to manage layouts, style, and themes, lists, buttons. Understand Android resources and intents. Explore the services offered by Android Studio. Get started with layouts and material designing.

Activity

Intent

Content Provider

Broadcast Receiver

Services

Understanding Android resources

Understanding Android Intents

Text Controls

Button Controls

The ImageView Control

Date and Time Controls

List Control

GridView Control

Spinner Control

Gallery Control

Understanding Adapters

Styles and Themes

Understanding Layout Managers

Hands-on:

Implement various layout and material designing aspects in applications built in Android Studio.

Android Menu

Learning Objective:

Explore the Android menu to work with events, sub-menus, Context menus, and pop-up menus.

Structure of the Android menu

Working with Menu and Events

Submenus, Context Menus, Pop-up Menus

Hands-on:

Create Android menu using Android Studio.

Sub-screen, Dialog and Action Bar

Learning Objective:

Learn about Android fragment and use it as part of an activity's user interface which contributes its own layout to the activity.

What Is a Fragment
Fragment Manager
Using Dialogs in Android
Working with Toast
Working with Action Bar and Tabs
Save data using text files
Making use of the AsyncTask class
Save data by using an SQLite database

Hands-on:

Create sub-screens, dialog and action bar. Create tabs in your application for quicker response.

Working with Preferences and Saving State

Learning Objective:

Explore the Preference Framework which is considered a powerful framework in modern mobile technology.

Exploring the Preferences Framework

ListPreference

CheckBoxPreference

EditTextPreference

Organizing Preferences

Hands-on:

Implement ListPreference, CheckBox Preference, EditText Preference, Organizing Preference.

SQLite Database

Learning Objective:

Learn about SQLite to store data to a text file on a device.

Introduction to SQLite Database

SQLiteOpenHelper and working with DB

Working with Cursor

Hands-on:

Use SQLite to store data to a text file.

Content Provider, Services, Threading and Handler

Learning Objective:

Learn to use Androids Built-in Providers and architecture of Content Providers which manage access to a central repository of data.

Androids Built-in Providers

The architecture of Content Providers

Consuming HTTP Services

Using the AndroidHttpClient

Addressing Multithreading Issues

Handler, message and message queue relationship

Using Background Threads (AsyncTask)

Hands-on:

Use Android applications for Content Provider, Services, Threading and Handler.

Working with Web Services and on Socket Connection

Learning Objective:

Understand network socket connection and other Android security models.

JSON parsing

XML parsing

Understanding the Android Security Model

Signing Applications for Deployment

Self-Signed Certificate Using the Keytool

Installing Updates to an Application and Signing

Understanding Security at the Process Boundary

Declaring and Using Permissions

Library Projects

StrictMode

Hands-on:

Implement network socket connection.

Exploring Maps and Location based Services

Learning Objective:

Learn about maps and location-based services to integrate into your Android applications.

Understanding the Mapping Package

Obtaining a Maps API Key from Google

Hands-on:

Integrate maps and location-based services in Android applications.