

Mobile Development Technology

Course Summary

Description

The course aims at equipping software quality assurance and testing professionals with the understanding of technologies used to develop mobile application that would be useful for planning, designing, and executing tests for mobile platforms. It addresses the most common mobile operating systems and surveys different types of hardware. Then we proceed to discussing the types of mobile applications while highlighting the differences between native, hybrid, and web apps. Finally, we will survey the most common development techniques. All this, while emphasizing the aspects relevant to planning, designing, and executing mobile tests.

Objectives

After taking this course, students will learn to:

- What are the most common operating systems that run on mobile devices, and what are their main characteristics
- What are the main types of hardware platforms used for mobile apps
- What are the most common types of mobile applications
- How the mobile apps are distributed to users and what are the different ways they can be installed and activated
- What are the most common programming tools and languages used for mobile development
- How the different aspects of mobile OS, hardware, and development technologies impact the ways we test mobile platforms

Topics

- What the course is about
- Operating Systems
- Hardware
- Types of applications
- Smartphone vendor application distribution process
- Development technologies

Prerequisites

There are no prerequisites for this course.

Duration

2 Days

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Course Outline

I. *What the course is about*

- A. Scope: what do we cover in depth, what do we glance over, what do we do not cover
- B. Goals: what will we learn
- C. Administrative items

II. *Operating Systems*

- A. Android
- B. iOS
- C. Windows
- D. other OS (review)
- E. Jailbreaking and rooting

III. *Hardware*

- A. Smartphones
- B. Tables
- C. Other options: special devices
- D. Hardware add-ons and their significance

IV. *Types of applications*

- A. Native apps
- B. Mobile websites
- C. Hybrid apps

V. *Smartphone vendor application distribution process*

- A. Apple's App Store
- B. Cydia
- C. Android's Google Play
- D. Windows Phone Store
- E. Company stores

VI. *Development technologies:*

- A. Web: HTML, JavaScript, XML web services, CSS, Web Services
- B. Responsive and mobile-specific websites
- C. Native apps technologies: Java, Objective-C, C#
- D. Cross-platform implementation: common language infrastructure
- E. Xamarin, etc.