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Sign up

Wear OS training for developers

3 days (21 hours)

Presentation

Wear OS is Google's operating system used for their connected watches. Our Wear OS training course will enable your development team to create several applications adapted for small screens.

During this training course, your developers will learn how to design optimized user interfaces, exploit contextual notifications and integrate features such as voice recognition, fitness tracking or message management. Your development team will discover advanced techniques such as integrating sensors for physical interactions, developing personalized dials or using cloud services for data synchronization. Your developers will increase their skills by mastering best practices for creating fluid and intuitive user experiences for connected watches. As with all our training courses, this one will include the latest developments in Wear OS.

Objectives

- Understanding the Wear OS ecosystem
- Master the basics of Wear OS application development
- Apply MVVM and LiveData principles
- Design user interfaces adapted to different screen types

Target audience

- Mobile developers
- Embedded systems engineers

Prerequisites

- Basic knowledge of Java or Kotlin
- Basic knowledge of user interface development

WEAR OS TRAINING PROGRAM FOR DEVELOPERS

INTRODUCTION TO WEAR OS

- Understanding the Wear OS ecosystem and history
- The different versions of Wear OS
- Key features
- Wear OS in the connected object market
- Presentation of official documentation and available resources

DEVELOPMENT ENVIRONMENT CONFIGURATION

- Installing and configuring Android Studio
- Installing the Wear OS SDK and emulators
- Creating a first Wear OS project
- Setting up and understanding the project structure
- Testing the project on an emulator and a watch

BASICS OF WEAR OS APPLICATIONS

- The components of a Wear OS application
- Using and managing sensors on Wear OS
- Interaction with notifications: creation, display and response
- Managing communication between watch and cell phone
- Development of a small application using sensors and notifications

APPLICATION ARCHITECTURE

- Applying MVVM principles to Wear OS
- Using LiveData and Room for data management
- Synchronize data between watch and smartphone
- Security and authentication methods in Wear OS applications
- Creating an application with optimized architecture

WEAR OS USER INTERFACES

- Design and navigation adapted to round and square screens
- Design attractive user interfaces
- WearableRecyclerView
- SwipeDismissFrameLayout
- Smooth animation and transitions
- User interface design for different screen formats

COMMUNICATION AND CONNECTIVITY

- Connectivity options: Bluetooth, Wi-Fi, NFC
- Application development using network communication
- Integration with Google Assistant on Wear OS
- Creating an application using NFC
- Discussion of actual and potential use cases

GOOGLE PLAY AND PUBLISHING

- Preparing and submitting a Wear OS application to the Google Play Store
- Optimizing the application for better visibility
- Manage updates and user feedback
- Google Play policies and requirements for Wear OS applications
- Submitting a demo application to the Google Play Store

TESTING AND MAINTENANCE

- Efficient testing of Wear OS applications
- Using automated test frameworks
- Debugging and solving common problems
- Maintenance and updating of applications in response to Wear OS evolutions
- Setting up an automated test suite for an existing application

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or learning difficulties.

in-company security (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.