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Developing Single Page Applications with the E-UI SDK: Hands-On

Overview

E-UI SDK is a next generation framework for building single page applications based on Web standards. To work effectively with this new SDK requires knowledge in a number of areas: ES6, Web components, the SDK itself and test tools. This course provides the knowledge required in these areas to enable developers to immediately begin building applications and components effectively.

Attendees will learn
- How to develop and test Web components and applications using the E-UI SDK
- Build Web components using Web standards
- Use the tools provided by E-UI SDK
- Develop composable applications using E-UISDK
- Develop custom components using E-UI SDK

Audience and Recommended Background
This course is for JavaScript developers who want to learn how to write E-UI SDK applications. It is assumed that attendees have a good knowledge of core JavaScript.

Course Approach
Taught material will be delivered in short sessions and will be followed by the opportunity to practice what has been taught and reflect on how to put it into practice.

Course Duration: 2 days

Course Content

Introducing the E-UI SDK
- Architecture drivers for a new SDK
- UX principles
- Architecture principles
- E-UI SDK structure
  - Component framework
  - Component libraries
  - Application framework
- Tools
  - CLI
  - Visual Studio code extension

Quick Overview of ECMAScript 6
- What is ES 6?
- Block bindings

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- Strings and regular expressions
- Arrow functions
- Extended object functionality
- Destructuring arrays and objects
- Symbols and symbol properties
- JavaScript classes and inheritance
- Modules

Working with Web Components
- What are Web components?
- Specifications
    - Custom elements
    - Shadow DOM
    - ES6 modules
    - HTML templates
- LitElement and lit-html
- Defining a new HTML element
- Creating and using a shadow root
- Introducing templates and slots
- Component lifecycle
- Event handling

Getting Started with E-UI SDK:Tools
- Generating a project
- Generating an application
- Building a project
- Running tests
- Serving the project

Architecture and Application Structure
- The architecture of an application
- The core components
    - Container
    - System bar
    - App and Panel classes
    - Content localization
- Application lifecycle and callbacks
- Configuring the application
    - Application configuration
    - Routing and navigation
    - Container menu and menu panel

Working with Built-In Components and Layouts
- Layouts
    - Card
    - Drop area
    - Flyout
    - Multi panel tile
    - Tabs

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- o Tile
- o Wizard
- Core components of the E-UI SDK
  - o Accordian
  - o Breadcrumb
  - o Button
  - o File
  - o Loader
  - o Menu
  - o Notification
  - o Input fields
  - o Tree
  - o Table
  - o Chart
- Component lifecycle
- Event handling in components
- State management

Building Custom Components
- Generating a new component
- Component lifecycle
- Component properties
- Templating
- Event handling
- Reusing components

Testing Components and Applications
- Unit testing Web components
- Application testing

Contributing to the UI SDK
- Why contribute?
- How to contribute: the community process
- Coding standards