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SAP Fiori Readiness

Gateway + SAPUI5 Training Curriculum

Paul J. Modderman, Sr. Product Architect and Technology Evangelist

Introductions

- Who's here?
  - Name
  - Role
- About Mindset

The Plan

- SAP Gateway and OData - Days 1-2
    - SAP Gateway overview
    - Create OData services
- SAPUI5 - days 3-5
    - UI5 overview
    - Practice applications
- What to expect

Fiori Overview

What Is It?

- A UX strategy
- Design principles
- Technologies
- What it's not: just 'mobile SAP'

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Fiori Overview
Motivating Factors

- Don't forget usability
- Design for flexibility - technology-wise
- Mobile is real
- Enterprise users want good UX

Fiori Overview
Design Principles

- Responsive - PC/Mac/Mobile
- Simple - "1-1-3"
- Coherent - Fiori Launchpad
- Delightful - Role-based, "Amaze me"

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Fiori Overview
Enabling Technologies

- SAP Gateway
  - OData
  - HTTP with REST principles
- SAPUI5
  - HTML/JavaScript/CSS → Web stuff
- Fiori Client → iOS, Android

SAP Gateway

What Is It?

- OData provisioning
- Fiori enabler - but doesn't have to be!
- ABAP system
  - Hub or plugin
  - Probably both
- ABAPers ABAP

SAP Gateway
REST Fundamentals

- **RE**presentational **S**tate **T**ransfer
  - Lightweight compared to SOAP
  - Server has no idea about client
  - Style, not a standard

SAP Gateway
REST -> HTTP -> CRUD

- HTTP
  - Methods
  - Request format - headers, body/payload
  - Response - numeric and payload

SAP Gateway
OData Fundamentals

- OData is:
  - Open protocol
  - Simple standard for REST APIs
  - Access data as a feed
  - Querying, set operations

SAP Gateway
OData Fundamentals

- Entity
- EntitySet
- Association

SAP Gateway
OData Fundamentals - $ Actions

- Some conceptually like SQL
  - $select
  - $filter
  - $orderby

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SAP Gateway
OData Fundamentals - $ Actions

- $metadata
- Specifying set size
    - $count
    - $top
    - $skip

SAP Gateway
OData Fundamentals - $ Actions

- Advanced!
  - $expand
  - $batch

SAP Gateway
OData Services - Modeling

- Generating from existing ABAP objects
  - FM/BOR interface
  - DDIC object
  - File

SAP Gateway
OData Services - Modeling

- Create Entity/EntitySet
  - Model DDIC Structure
  - Handle Attributes

SAP Gateway
OData Services - Implementation

- (C) Create Entity
- (R) Get Entity
- (U) Update Entity
- (D) Delete Entity
- (Q) Get EntitySet

SAP Gateway
Advanced Topics

- Multi-Origin
    - Maintain multiple aliases
    - Control via enhancement
    - Combine multiple origin systems into one request: ";mo"

SAP Gateway
Advanced Topics

- BEx Easy Queries
- External Data
- $batch

SAP Gateway
Tools and Resources

- GW Client
- Browser tools
  - Postman
  - Advanced REST Client
  - UI5 add-on for Chrome
- *OData and SAP NetWeaver Gateway* book

SAPUI5
General Information

- Foundation for Fiori UI
- Based on open source libraries
- Javascript, HTML5, jQuery, Datajs, D3
- CSS/LESS/Themes

SAPUI5
Development environment

- SAP
  - Web IDE
  - Eclipse
  - ABAP Workbench (SE80)
- Non SAP
  - WebStorm, Notepad++ etc.

SAPUI5
Loading and Initializing

- Sources
  - Standard libraries
  - Custom applications
- Bootstrap

SAPUI5
Models: OData

- Support
  - annotations
  - metadata
  - CSRF tokens
  - batch operations
- Version 2: improvements

SAPUI5
Models

- JSON
  - (A)sync data load
  - Common usecase: intermediate data container
- XML
- Properties

SAPUI5
Views

- XML
- JS
- HTML

SAPUI5
UI elements/libraries

- Aggregations, associations and properties
- Binding
  - binding modes
  - formatters
- jQuery/delegates
- sap.m, sap.ui etc.

SAPUI5
Controllers

- Regular javascript "classes" (variables and methods through "this" variable)
- Hook lifecycle methods: onInit, onBeforeRender etc.
- Events - how controllers "talk" to each other

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SAPUI5
Components

- Delivery unit for all Fiori applications
- Metadata
  - Routes
  - Model
  - Navigation
  - etc.

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SAPUI5
Responsive and mobile

- L-M-S model
- Support of major OS and device types
- Support of device features (GPS, bar code scanner, camera) through Cordova plugins

SAPUI5
Extensions

- View: Extensions, Modification, Replacement
- Controller: Extensions, Replacement
- i18n resources text customization

SAPUI5
Useful tools/tips and tricks

- Dev tool in Chrome/F12 in IE
- SAPUI5 Splash (Ctrl Shift Alt P)
- SAPUI5 Diagnostic tool (Ctrl Shift Alt A/S)
- Fiori stars
- FastDesigner
- Control Explored
- Fiori Design Guide
- Step by Step tutorials
- SDK
- Fiori catalog