

Developing with Eclipse RCP

COURSE OUTLINE



Description

The “Developing with Eclipse RCP” course will teach all you need to implement your own application based on Eclipse RCP 3.x.

This course explains the core frameworks in Eclipse, the plug-in architecture, extension points, UI programming with SWT and JFace and everything else you need to create your own RCP application. Participants will begin working with simple examples, which will become more complex as the course progresses.

Audience

Software developers and architects

Prerequisites

Experience with using Eclipse, strong knowledge of Java, and familiarity XML

Duration and Format

Four-day instructor-led class with at least 50% hands-on labs and tutorials

Outline

1. Introduction to RCP

- Brief history
- Benefits / examples
- Anatomy of an RCP application
- Internal architecture
- Concept of Plug-in based modularization
- First glance at PDE
- Related links and resources
- Optional: introductory demos (plug-ins/minimal RCP)

2. RCP Application lifecycle

- Physical artifacts
- Runtime artifacts
- Development time artifacts

3. Internal structure

- Runtime and OSGi
- Generic Workbench
- Plug-ins
- Start-up sequence
- Extension points, extensions, contributions
- SWT / JFace
- Related links and resources

4. Workbench

- Eclipse’s UI-metaphor
- Launching : IApplication
- Windowing: window, menu, page, part
- Advisor classes
- Related links and resources

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5. Publishing

- Plug-in publication
- Products
- Features
- UpdateSite
- UpdateManager
- Branding, themes, and customizations
- Related links and resources

6. Plug-ins

- Identity
- Configuration (MANIFEST.MF, plugin.xml)
- Lifecycle
- Related links and resources

7. Contributing to Workbench

- Extension points
- Extensions
- Contributions to the Workbench
- First examples of Contributions
- Perspectives
- Views
- Using ActionBarAdvisor versus extension points
- Create your own extension point
- Related links and resources

8. Introduction to SWT

- About SWT
- Ideas behind SWT
- SWT packages
- Basic structure of an SWT application
- Threading in SWT
- SWT widgets / controls
- SWT custom widgets
- SWT events
- Layouts
- Resource management: colors, fonts, images
- SWT / AWT bridging
- Related links and resources

9. Introduction to JFace

- Introduction
- JFace structured viewers
- JFace dialogs and wizards
- Selection services
- Preference pages
- Related links and resources

10. Views

- Introduction / concept of a view
- Views: the general-purpose Workbench Part
- How to create a custom view
- Related links and resources

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11. Commands and Actions

- Introduction
- Menus, Commands, and Handlers
- Key bindings
- Types of Actions
- Lazy loading
- Contributing actions to Views
- Visibility and enablement
- Actions and selections
- Related links and resources

12. Editors

- Introduction/concept of an Editor
- Difference between a View and an Editor
- Types of Editors
- Implementing an Editor
- Dirty state management
- Contributing and opening an Editor
- Related links and resources

13. Wizards

- Contributing wizards
- Defining a wizard extension
- Implementing a Wizard
- Implementing a WizardPage
- Customizing a wizard
- Controlling wizard page progression
- Reusable specialized wizard pages
- Related links and resources

14. Help

- Structure of the Eclipse help system
- Contributing to the Table of Contents
- Context sensitive help
- Help contexts
- Dynamic Help
- Active Help
- Related links and resources

15. Eclipse e4 and the Future

- Introduction to Eclipse e4