

# Eclipse RCP, Plug-in development

Advance Course

## Eclipse Platform

Eclipse SDK is both, a leading Java Integrated Development Environment (IDE) and the single best tool available for building arbitrary tools and applications.

The SDK is composed of several Eclipse projects, including the Platform, Java Development Tooling (JDT), and the Plug-in Development Environment (PDE). Using a subset of these projects, you can build powerful IDE's and applications that work in conjunction with application servers, databases, and other backend resources to deliver a rich user experience.

## Workshop

This workshop is an in-depth introduction to the Eclipse Rich Client Platform (RCP), and the Plug-in development capabilities. In this course, we'll cover all the key fundamental topics described in the course content with appropriate hands-on exercises.

## Prerequisite

Knowledge of Java and experience of using Eclipse IDE for Java development are essential.

## Modalities

Duration: 4 days

Structure: Instructor-led with 100% hands-on labs

Participants: Maximum 10 per workshop

Equipment: Participants supply their own computer with the latest Eclipse installed.

# Agenda

## Introduction

- Introduction - Eclipse Platform
- Introduction Eclipse 3.x and the new Eclipse 4 platform
- Workbench - Window, Menu, Page, Perspective, Views, and Editors.

## Standard Widget toolkit

- Basic Structure
- Layout and Layout Managers
- SWT Events - Key, Mouse, Selection.

## JFace Components

- Viewers - Tree, Table, and List
- Content and Label providers
- Workbench Selection service
- Views and Editors
- Custom Dialogs
- Wizards
- Perspective
- Creating and persisting the Preference and Project properties.

## Command framework

- Command framework
- Expression framework

## Jobs framework

- Using the Jobs API for long-running operations.

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## OSGi

- Introduction
- Bundle Class-loading
- OSGi services.

## Building using Tycho

- Converting plug-in projects to Maven project
- Configuring the pom file to work with the maven Tycho plugin
- Looking at packaging types - eclipse-plugin, eclipse-feature...etc.

## Building, Branding and packaging

- Product configuration
- Feature configuration
- Target platform configuration
- Update site (P2)
- Local and remote update sites.

## Testing with SWTBot

- Introduction
- Testing using the SWTBot API.

## Eclipse 4

- Introduction to E4 and the Eclipse Modeling Framework (EMF)
- Application model
- Annotations and dependency injection
- Services - Existing and custom
- Contributing parts
- Commans and Handlers
- Migrating to Eclipse 4 from Eclipse 3.x.