

Eclipse Modelling Framework

Training Program

Target Audience

This course is targeted at software architects and developers who are designing and developing eclipse based commercial and non commercial applications.

Goal of the Training

- Fundamental understanding of Model Driven Development and Code Generation Techniques.
- Use of EMF in MDD for modeling and designing an Eclipse plugin development project.
- Extending EMF's core features like Dynamic Modelling, Loading and Serializing.
- Introduction to Java Emitter Templates

Prerequisites

- Strong knowledge of Java and XML.
- Should have hands on developing Eclipse plugins.
- Knowledge of UML and Design Patterns would be helpful.

Duration and Additional Information

- It is a 2 Day Program and extends upto 8hrs each day. Therefore a 16hrs Courseware.
- The format is 60% Lab and 40% Theory.
- Max 15Nos per Class.

For details of the Course please refer to the attached Annexure.

Annexure – Table of Contents for EMF Training

1. What is Model Driven Development ? - An Overview
 - MDD – An Introduction
 - Meta modelling and Meta Object Facility
 - Eclipse Modeling Framework
2. Introduction to Case Study
 - A Filesystem Model
 - UML Diagram
 - Goal of the Application
3. Creating a Model using Ecore
 - What is Ecore ?
 - Insight into Ecore's Ecore
 - Defining Types, Attributes and Associations in Ecore
4. Usage of Generator Model
 - Purpose of Generator Model
 - Creating a GenModel
 - Properties of a GenModel
5. EMF Generator
 - Generating an Application
 - Analysing what is Generated ?
 - Running the Application.
6. Defining EMF Models
 - Using Annotated Java
 - Using XML Schema
 - Using UML 2.0
 - Using Ecore
7. Understanding the EMF Model Generator Patterns
 - A Class becomes ...
 - An enumeration, attribute, reference, operation becomes ...
 - Use of Factory, Package, Switch and Adapter Factory
8. Understanding the EMF Edit and Editor Generator Patterns
 - Commands, Item Providers, Property Sources
 - MPE containing Tree, Table Viewers and Wizards
9. Loading and Serializing Mechanisms in EMF
 - Introduction to ResourceSet and EMF Resource.
 - Loading using ResourceSet with and without Java Classes.
 - Saving the Model back into Resource.

10. Introduction to JET

- Purpose of JET
- JET Directives, Scriptlets and Expression
- A Simple Example
- Look into EMF JET Templates

11. Extending Generated Code

- Changing JET
- Changing Generated Code