

Requirements Analysis Modeling (RAM)

Using Sparx Systems EA software and UML

Learning Outcomes

RAM covers the essential analytical and modelling techniques to develop UML-compliant Requirements Analysis Model specification using Sparx Systems Enterprise Architect modeling software.

Upon completion of this program, trainees will have the competencies to:

- **Understand** what is a model, the process and benefits of modelling, universal modelling standards such as UML, the challenges in modelling and how to incorporate modeling practices into existing software development lifecycle (SDLC)
- **Analyse** information be it in document, diagram, models or verbal form to develop software functional and data requirements models or specifications
- **Develop** the systems functional requirements using the UML Use Case Model
- **Develop** the systems data requirements using the UML Class Diagram and Entity Relationship Diagram
- **Review** the models to ensure correctness and completeness
- **Manage** models such as model baseline, traceability, transformations and specification document generation

Curriculum Structure

The consultative-centric training curriculum incorporates various learning and teaching methodologies such as:

- **Lecture** led by trainer on key concepts of Architecture modeling
- **Demo** by trainer the modeling tool on how to develop the UML and other related models
- **Hands-on Workshops** for trainees to have in-depth practice to apply lessons learnt
- **Presentation** of workshop solutions by trainees for feedback
- **Reflection** on how to apply lessons learnt into a real-life project

Duration – 2 Days

- **Full-time ILT** (Instructor-Led-Training) lessons will run back-to-back daily from 9.30am to 5.30pm inclusive of 1-hour lunch break and two 15-minute breaks.
- **Part-time ILT** (Instructor-Led-Training) lessons will run once per week on Saturday from 9.30am to 5.30pm inclusive of 1-hour lunch break and two 15-minute breaks.

Suggested Topics

1. Introduction

- Model, Modeling Process, Modeling Standards
- Brief on generic Case study
- Import User's Requirements Models

2. Functional Requirement Modeling (FRM) with UML Use Case Diagram

- Introduction to FRM
- Apply analysis techniques to identify functional requirements such as users, external system interfaces, functions, sub-functions and other exceptions handling
- Develop the use case diagram(s) to visualize functional requirements

Workshop 1: Analyse, identify and develop Functional Requirement using UML Use Case diagram

3. Functional Requirement Specification with Use Case Scenario Specification

- Apply analysis techniques to robustly identify use case scenarios
- Specify functional requirement details using the use case model scenario specifications
- Review scenario specifications

Workshop 2: Analyze and specify functional requirement specification using use case scenario specifications

4. Data Requirement Modeling (DRM)

- Introduction to DRM
- Apply analysis techniques to identify data requirements such entity classes, attributes and relationships
- Develop the data requirement models using the UML Class Diagram

Workshop 3: Analyse, identify & develop data requirements model using UML Class Diagram

5. Analysis Model Management

- Model Baseline
- Model Traceability & Impact Analysis
- Review FRM & DRM using Matrix Specification and Traceability

Workshop 4: Analysis Model Management using EA

Pre-requisites

Attendees are assumed to have

- Attended the 1-day EA4SAM workshop; and
- Some knowledge in analysing and documenting software requirements specifications.

Venue Options

Public training:

- 80Twenty venue.
- Trainees will be from various organizations in the same class.

Exclusive training:

- 80Twenty or customer or customer-preferred venue.
- Class exclusive to only your own company's trainees.

Course Requirements

You will need to bring the following for the training:

- Your own Microsoft Windows 7 or later notebook installed with Enterprise Architect Corporate Edition
(Download 30-day evaluation license from <http://www.sparxsystems.com/bin/easetup.msi>); and
- The EA4SAM course material.