[TOPCODER]
SOFTWARE

XMI Reader Diagram Interchange 1.0 Requirements Specification

1.   Scope

1.1 Overview

The XMI Reader Diagram Interchange component is a plugin for XMI Reader component. It implements the ContentHandler interface and is able to parse all the elements for the classes in the Diagram Interchange component.

1.2 Logic Requirements

1.2.1 Handler

The component provides a concrete implementation of org.xml.sax.ContentHandlers type that will be used by the XMI Reader component.

It is able to parse all the elements for the classes in the UML Diagram Interchange component.

1.2.2 XMIReader

The handler will keep a reference to the XMIReader in order to use the registered elements functionality it provides. It will also have a reference to the UMLModelManager class, as the result is placed in the Diagrams instance in this class.

1.2.3 Referenced elements

The handler will set the created elements in the map of elements in the XMIReader. It will also get the elements it needs from that map. If an element is missing, it will add the property to the map of element properties in the XMIReader. More details can be found in the XMI Reader component.

1.3 Required Algorithms

None.

1.4 Example of the Software Usage

The component will be used in the TopCoder UML Tool to parse the UML Diagrams from XMI files.

1.5 Future Component Direction

None.

2.   Interface Requirements

2.1.1 Graphical User Interface Requirements

None.

2.1.2 External Interfaces

The design must follow the interface found in the class diagram with the component interfaces. The designer is encouraged to add to the existing interface, but not to remove anything.

2.1.3 Environment Requirements

- Development language: Java 1.5
- Compile target: Java 1.5

2.1.4 Package Structure
>   com.topcoder.uml.xmi.reader.handlers.diagram

3.   Software Requirements

3.1 Administration Requirements

3.1.1 What elements of the application need to be configurable?
>   None.

3.2 Technical Constraints

3.2.1 Are there particular frameworks or standards that are required?
>   None

3.2.2 TopCoder Software Component Dependencies:

- XMI Reader 1.0

- Diagram Interchange 1.0

- Configuration Manager 2.1.5 - recommended

>   **Please review the <u>TopCoder Software component catalog</u> for existing components that can be used in the design.

3.2.3 Third Party Component, Library, or Product Dependencies:
>   None

3.2.4 QA Environment:

- Solaris 7
- RedHat Linux 7.1
- Windows 2000
- Windows 2003

3.3 Design Constraints

>   The component design and development solutions must adhere to the guidelines as outlined in the TopCoder Software Component Guidelines. Modifications to these guidelines for this component should be detailed below.

3.4 Required Documentation

3.4.1 Design Documentation

- Use-Case Diagram
- Class Diagram
- Sequence Diagram
- Component Specification

3.4.2 Help / User Documentation

- Design documents must clearly define intended component usage in the 'Documentation' tab of Poseidon.