

Dotted Arrow Example

XMI Template for Dotted FK Arrow (Visual Paradigm 17.3, Eclipse UML2 XMI 2.1)

Below is a minimal, reusable XMI pattern that produces a dotted arrow from a Foreign Key (FK) table to its Primary Key (PK) table, as required for Logical Data Model ERD in Visual Paradigm.

1. Semantic Definition (uml:Dependency)

Place this inside your <uml:Package> section, next to your table (uml:Class) definitions.

```
<!-- Dotted arrow FK connector: tb_employee_survey --> tb_employee --> -->
<packagedElement xmi:type="uml:Dependency"
  xmi:id="dep.survey_employee"
  name="FK_tb_employee_survey_to_tb_employee"
  client="tbl.tb_employee_survey"
  supplier="tbl.tb_employee"/>
```

`client` = FK table (source of the arrow) `supplier` = PK table (target of the arrow)

The name `FK_tb_employee_survey_to_tb_employee` appears as the connector label in Visual Paradigm.

✓ Additional Implementation Note (Recommended)

To ensure the connector name appears correctly in Visual Paradigm, every `uml:Dependency` element **must include an explicit** `name` **attribute** following the pattern:

```
FK_<source_table_name>_to_<target_table_name>
```

This label is **mandatory**: Visual Paradigm uses it as the visible connector name in the Logical Data Model ERD.

If omitted, the dotted arrow will be created but will not display a readable FK label.

Example:

```
<packagedElement xmi:type="uml:Dependency"
  xmi:id="dep.tb_employee_survey_to_tb_employee"
  name="FK_tb_employee_survey_to_tb_employee"
  client="tbl.tb_employee_survey"
  supplier="tbl.tb_employee"/>
```

Always check that the label appears in the diagram after import to confirm compliance.

2. Diagram Elements (notation)

Add this inside your `<notation:Diagram>` section.

```
<!-- Node for source (FK) table -->
<children xmi:type="notation:Node" xmi:id="node.tb_employee_survey"
type="Class">
  <element xmi:idref="tbl.tb_employee_survey"/>
  <layoutConstraint xmi:type="notation:Bounds" x="600" y="120" width="201"
height="115"/>
</children>

<!-- Node for target (PK) table -->
<children xmi:type="notation:Node" xmi:id="node.tb_employee" type="Class">
  <element xmi:idref="tbl.tb_employee"/>
  <layoutConstraint xmi:type="notation:Bounds" x="600" y="360" width="201"
height="115"/>
</children>

<!-- The visible dotted arrow (Dependency) -->
<edges xmi:type="notation:Edge" xmi:id="edge.dep.survey_employee"
type="Dependency" source="node.tb_employee_survey"
target="node.tb_employee">
  <element xmi:idref="dep.survey_employee"/>
  <styles xmi:type="notation:LineStyle" lineStyle="dotted"/>
  <bendpoints xmi:type="notation:RelativeBendpoints" points="[0,0]"/>
</edges>
```

3. Reusable Template (Parameterized Version)

Use this pattern to define any FK → PK dotted arrow. Replace placeholders accordingly.

```
<!-- Inside <uml:Package> -->
<packagedElement xmi:type="uml:Dependency"
xmi:id="dep.FK_SRC_to_TGT"
name="FK_{{src_table_name}}_to_{{tgt_table_name}}"
client="tbl.{{src_table_id}}"
supplier="tbl.{{tgt_table_id}}"/>

<!-- Inside <notation:Diagram> -->
<children xmi:type="notation:Node" xmi:id="node.{{src_table_id}}" type="Class">
```

```

    <element xmi:idref="tbl.{{src_table_id}}"/>
    <layoutConstraint xmi:type="notation:Bounds" x="{{x1}}" y="{{y1}}"
width="201" height="115"/>
</children>

<children xmi:type="notation:Node" xmi:id="node.{{tgt_table_id}}" type="Class">
    <element xmi:idref="tbl.{{tgt_table_id}}"/>
    <layoutConstraint xmi:type="notation:Bounds" x="{{x2}}" y="{{y2}}"
width="201" height="115"/>
</children>

<edges xmi:type="notation:Edge" xmi:id="edge.dep.FK_SRC_to_TGT"
    type="Dependency" source="node.{{src_table_id}}" target="node.
{{tgt_table_id}}">
    <element xmi:idref="dep.FK_SRC_to_TGT"/>
    <styles xmi:type="notation:LineStyle" lineStyle="dotted"/>
    <bendpoints xmi:type="notation:RelativeBendpoints" points="[0,0]"/>
</edges>

```

✓ Expected Result in Visual Paradigm

- Dotted directional arrow from FK table → PK table.
- Connector label = Dependency name (FK_tb_employee_survey_to_tb_employee).
- No multiplicities, no cardinalities, no role names.
- Automatically visible in the imported ERD diagram.