



Relationships

- Drawing has a composition relationship with Polygon
- Drawing has an composition relationship with Line
- Drawing has a realization relationship with Point
- Polygon has an aggregation with Line.
- Line has a aggregation with Point.

Multiplicity

- Polygon has 3 or more (many) Lines.
- Each Line has 2 or more (many) Points
- Drawing can have 0 or more Polygons
- Drawing can have 0 or more Lines
- Drawing can have 0 or more Points

Explanation

Drawing has an Aggregation relationship with Polygon and Line, Line and Polygon could still exist in memory. Also a Drawing can have zero to many Polygons and Lines. Line has an aggregation Relationship with Point for the same reasons. Point could still exist in memory if line is deleted. Each line needs atleast two points but it could have more instances. Polygon has an aggregation relationship with Line as well. Each polygon requires atleast 3 or more Lines. However, this multiplicity line the Line -> Point multiplicity is shown as one - many. Drawing has a realization relationship with Point since it doesn't directly interact with Point in this example but needs to know the details of point for Line.