



CO457
Business Modelling

Module Week 10



Business Glossary

Business Glossary

- All business domain **objects, acronyms, and terms** should be described in the business glossary
- Start with a sentence about what type of thing it is
 - **A Chef is an employee ...**
 - **A Refrigerator is a storage appliance ...**
- Add purpose and contextual information
 - **...who works in the kitchen preparing meals**
 - **...that is used to store food items and keep them cold**

Business Glossary

- **Capitalise the first letter** of all words that are defined in the glossary
- Follow up with sentences about
 - The types of this thing, if relevant
 - What happens to it
 - When it is created, modified, or destroyed
 - How it is related to other things
 - Any important properties, such as how it is identified
 - An example or two
 - Any synonyms

Business Glossary: Examples

Term	Description
Chef	A Chef is an employee who works in the Kitchen preparing Meals. There are three types of Chefs: Executive Chef, Sous Chef, and Line Chef. Chefs are interviewed, hired and paid by the Office Manager. Newly hired Chefs are trained by the Executive Chef. Each Chef works at a particular Station based on the dishes they prepare. For example, a Sous Chef who works at the cold food (salads, etc.) station is also known as a Garde Manger.
Refrigerator	A Refrigerator is a Storage Appliance that is used to store Food Items and keep them cold. It keeps food at a temperature of four degrees Celsius. The Refrigerators are cleaned monthly by the Cleaning Staff. They are located at the back of the Kitchen beside the Freezer. For inventory purposes Refrigerators are identified by an asset number. A Refrigerator is also known as a Fridge.



Attributes

Business Domain Model: Detailed Level

- At the detailed level, the business domain model includes
 - **Attributes**
 - **Multiplicity on associations**
 - **Aggregation**
 - **Capacity requirements**
 - Quantities and growth rates
- Not all the detail is shown on the diagram
 - Capture it in the textual part of the model

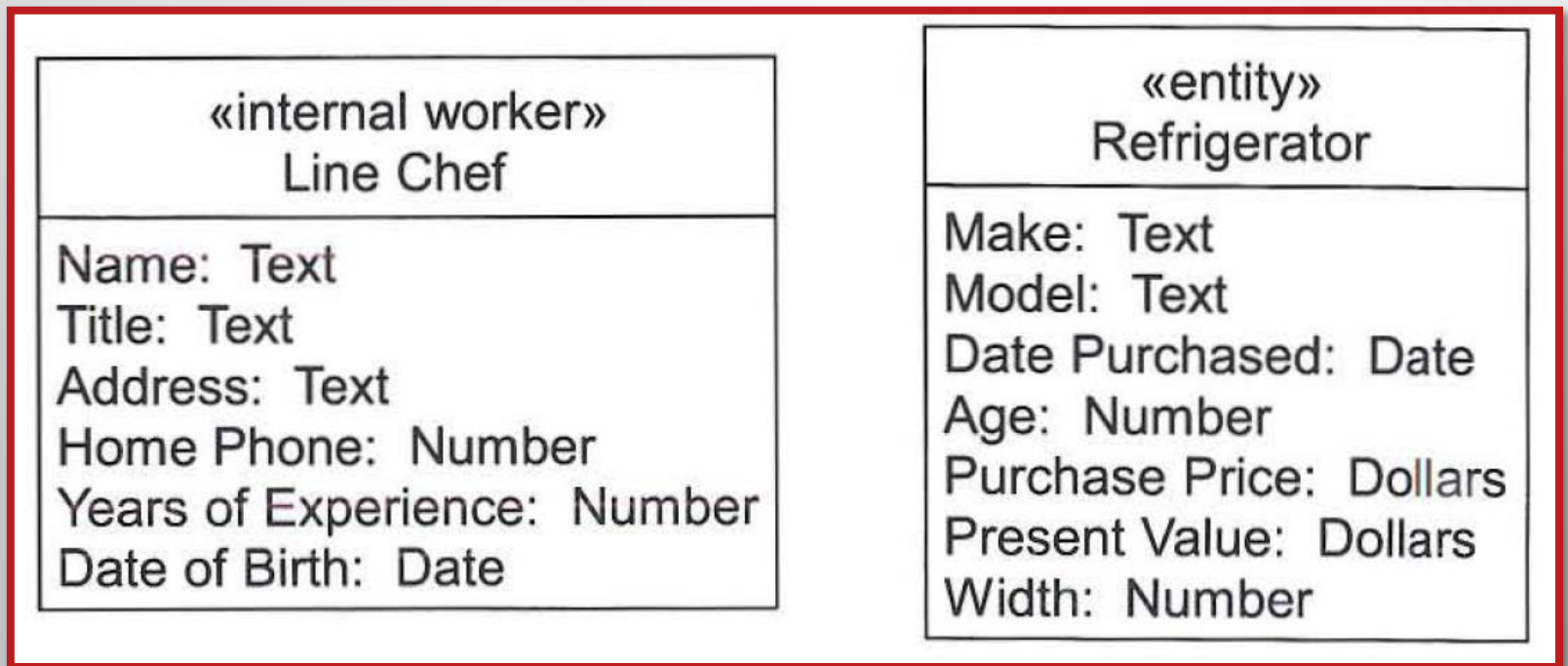
Detailed Level: Attributes

- **Attributes are the data properties** of business domain objects
 - Objects need **more than one attribute to describe them**
- Attributes can be displayed on the diagram



Detailed Level: Attributes

- Only **attribute names and data types** appear on the diagram



Detailed Level: Attributes

- Attributes have properties
 - **Names**
 - **Data types (number, text, date, time)**
 - **Ranges of values**
 - **Format**
- Numeric attributes may have
 - Units
 - Precision
- Textual attributes may have
 - Maximum length (number of characters)

Detailed Level: Attributes

- Properties of refrigerator attributes
- All **attribute properties are captured in the textual** part of the model

Refrigerator					
Attribute names	Data type	Range of values	Format	Max. length	Units
Make	Text			80	
Model	Text			50	
Date Purchased	Date	Before today	DD/MM/YYYY		
Age	Number	> 0	NN		Years
Purchase Price	Number	> 0	\$ NNNN.NN		Dollars
Present Value	Number	>= 0	\$ NNNN.NN		Dollars
Width	Number	16 to 40	NN		Inches



Associations

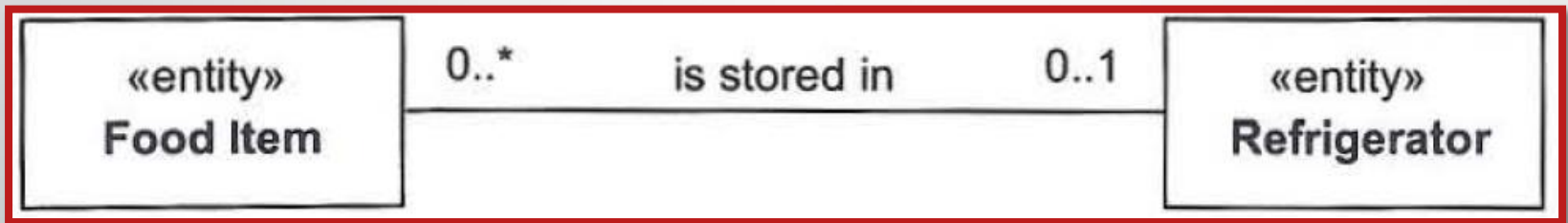
Detailed Level: Association Multiplicity

- **Multiplicity on associations describes how many of one object can be related to the other**
- Consists of a minimum and maximum value
- Used in the two detailed structural business rules for an association

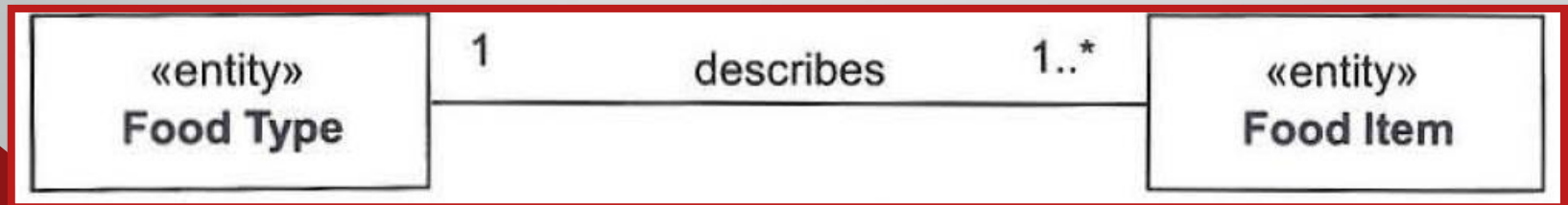
Symbols on the diagram	Read as
0..1	Zero or one
1	One and only one
0..* or *	Zero or more
1..*	One or more
3..*	Three or more
0..32	Zero up to thirty-two

Detailed Level: Association Multiplicity

- **Each Food Item is stored in zero or one Refrigerator**
- Each Refrigerator stores zero or more Food Items

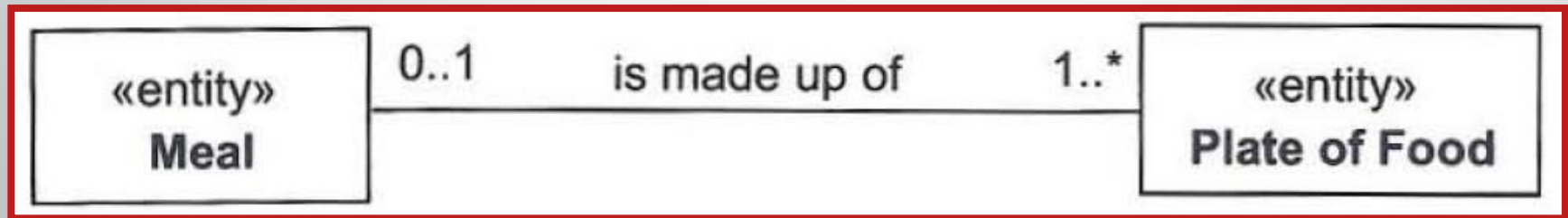


- **Each Food Type describes one or more Food Items**
- Each Food Item is of one and only one Food Type



Detailed Level: Association Multiplicity

- **Each Meal is made up of one or more Plates of Food**
- Each Plate of Food is part of zero or one Meal
 - Is this correct?



Detailed Level: Aggregation Associations

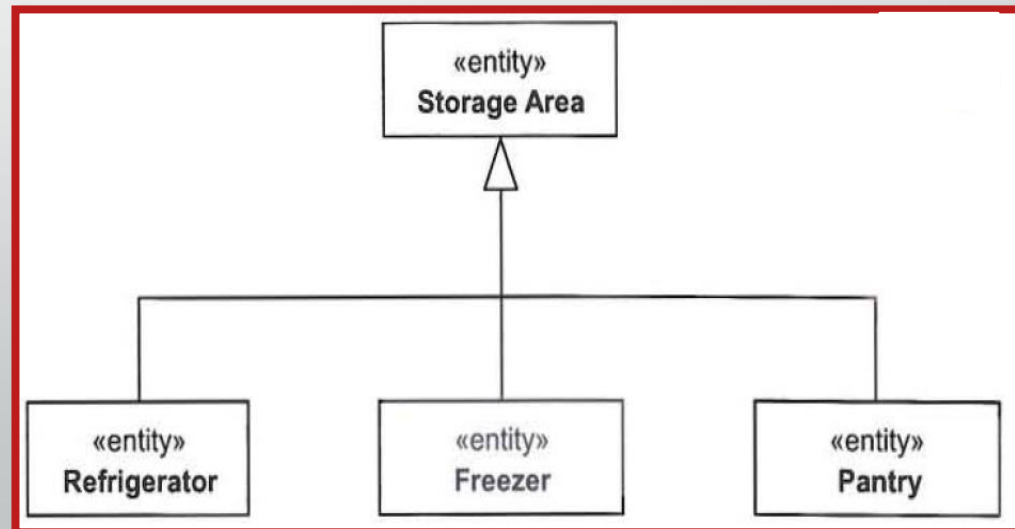
- The diamond aggregation symbol can be used anywhere the association could have been **labelled 'is made up of'** **'contains'** or **'is part of'**



- Each Meal is made up of one or more Plates of Food
- **Each Plate of Food is part of one and only one Meal**

Generalisation

- Generalisations are also documented as structural business rules
 - A Refrigerator is a kind of Storage Area
 - **A Freezer is a kind of Storage Area**
 - A Pantry is a kind of Storage Area
 - Kinds of Storage Areas are Refrigerators, Freezers, and Pantries

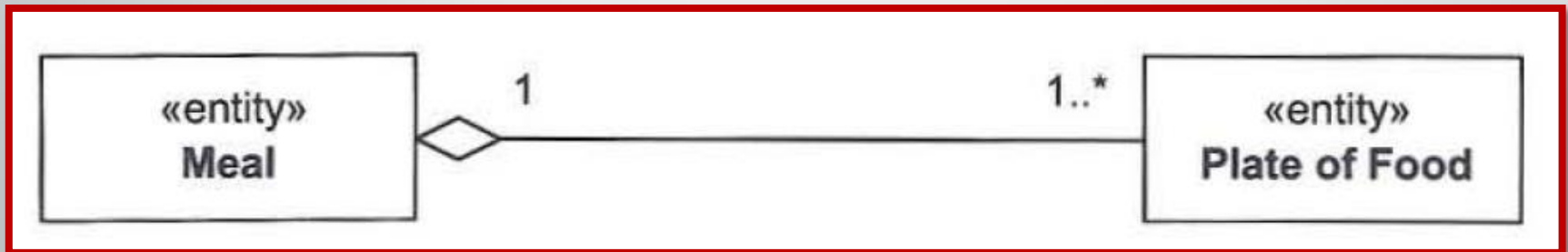


Capacity Requirements

- **Quantity** of objects in the business
 - There are 120 complete sets of cutlery
- **Growth** rate of the quantity
 - There is no change in the amount of cutlery per year
- **Frequency** of changes to the object
 - Due to damage and theft, 15 sets of cutlery are replaced each year
- **Disposal** of objects
 - Due to damage, 10 sets of cutlery are disposed of yearly
- **Archiving** or deletion of data
 - Packing slips are thrown out after they have been checked against the food suppliers' invoices

Quick Quiz

- Which structural business rule is correct for this diagram?
 - Each Meal is made up of zero or more Plates of Food
 - A Plate of Food is a kind of Meal
 - Each Plate of Food is part of one Meal
 - Each Meal is eaten with one or more Plates of Food



Quick Quiz

- Which structural business rule is correct for this diagram?
 - A Freezer is a kind of Storage Area
 - A Freezer is in a Storage Area
 - The Storage Area consists of a Refrigerator, a Freezer, and a Pantry
 - None of the above

