

---

# **CHAPTER 13**

## **Specifying data requirements**

- Student should enhance the ways to explore and represent the data
- Student understand the ways to specify any reports or dashboards of application needs to generate.

# Contents

---

1. Modeling data relationships
2. The data dictionary
3. Data analysis
4. Specifying reports
5. Dashboard reporting

- 
- Purpose
  - ERD or Class diagram?
  - How to build ERD (remind) and class diagram

- Definition
- Purpose
- Example

Data Element	Description	Composition or Data Type	Length	Values
Chemical Request	request for a new chemical from either the Chemical Stockroom or a vendor	Request ID + Requester + Request Date + Charge Number + 1:10{Requested Chemical}		
Delivery Location	the place to which requested chemicals are to be delivered	Building + Lab Number + Lab Partition		
Number of Containers	number of containers of a given chemical and size being requested	Positive integer	3	
Quantity	amount of chemical in the requested container	numeric	6	
Quantity Units	units associated with the quantity of chemical requested	alphabetic characters	10	grams, kilograms, milligrams, each
Request ID	unique identifier for a request	integer	8	system-generated sequential integer, beginning with 1

- Purpose
- CRUD matrix : Create, Read, Update, and Delete
- Example

Use Case \ Entity	Order	Chemical	Requester	Vendor Catalog
Place Order	C	R	R	R
Change Order	U, D		R	R
Manage Chemical Inventory		C, U, D		
Report on Orders	R	R	R	
Edit Requesters			C, U	

**FIGURE 13-5** Sample CRUD matrix for the Chemical Tracking System.

- Many applications generate reports from one or more databases, files, or other information sources.
- Reports can consist of traditional tabular presentations of rows and columns of data, charts and graphs of all types, or any combination
- Exploring the content and format of the reports needed is an important aspect of requirements development

- Eliciting reporting requirements
- Report specification considerations
  - Consider other variations
  - Find the data
  - Anticipate growth
  - Look for similarities
  - Distinguish static and dynamic reports
  - Prototype reports
- A report specification template: page 255



- Definition

A dashboard is a screen display or printed report that uses multiple textual and/or graphical representations of data to provide a consolidated, multidimensional view of what is going on in an organization or a process

- Purpose

- pull together information about sales, expenses, key performance indicators (KPIs), and the like.

- Stock trading applications display a bewildering (to the novice) array of charts and data that the skilled eye can scan and process at a glance

- How to build