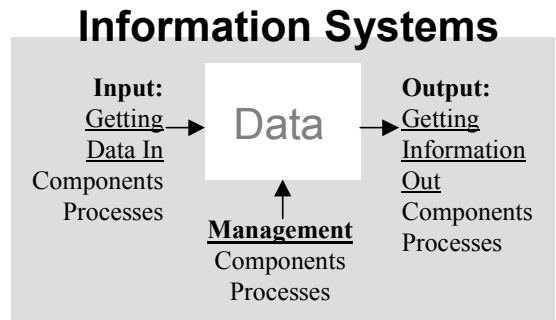


Recall...

Learning Objectives for this Class

1. Use: Use an information system, specifically one using a relational database, to accomplish activities on the job.
2. Diagnose: Diagnose problems and issues that may arise in workplace and professional interaction with information systems.
3. Evaluate: Evaluate different alternatives & decisions in the configuration of an information system.
4. Relationship to IE: Describe the relationships between Information Systems and the Industrial engineering profession.
5. Ethics: Recognize and resolve ethical issues related to information systems.
6. Lifelong Learning: Develop plans for learning more about information systems issues.

Our Status



WHERE HAVE WE BEEN?

- Phase 1: Scope and Design of Information Systems
 - Information systems
 - Database approach
 - Design of information/database systems – SDLC
 - Relationship of Information Systems to IE
 - Differences between data and information
- Phase 2: Describing and Designing Data
 - Conceptual Design and ER Diagrams
 - What is the important data?
 - Logical Design and Relational Data Schemas
 - How should we organize it in a database?
 - Physical Design and Access Databases
 - Creating the actual database

WHERE ARE WE GOING?

- Phase 3: Interacting with Data
 - Getting data in and out (processes)
 - *SQL (Chapter 9, Some of Chapter 10)*
 - Getting data in and out (components)
 - *Client Server Architecture (Chapter 8)*
 - Managing Data –
 - *Database Administration (Chapter 13)*

SQL:

Structured Query Language

- A standardized language (set of commands) for creating and querying relational databases.
- SQL Command Types
 - Data Definition Language (DDL) – The commands used to define a database, including ...
 - Create table / Drop table / Alter table
 - Create index / Drop index / Alter Index
 - Data Manipulation Language (DML) – the commands used to maintain and query a database, including...
 - Insert ... into ...
 - Delete .. from...
 - Update ...
 - Select ... from ...
 - Data Control Language (DCL) – The commands used to control a database, including administering privileges and committing data..
- Putting SQL in context
 - In Access?
 - In general?
 - Why valuable...

SQL - SELECT

- General Command

Question: What products have more than 4 units on hand?

```
Select Product_Name, On_Hand  
From Products  
Where On_Hand>4;
```

SELECT: Lists the columns (including expressions involving columns) to be included in the query result
FROM: Identifies the tables from which columns will be chosen
WHERE: Includes the conditions for row inclusion in the query result

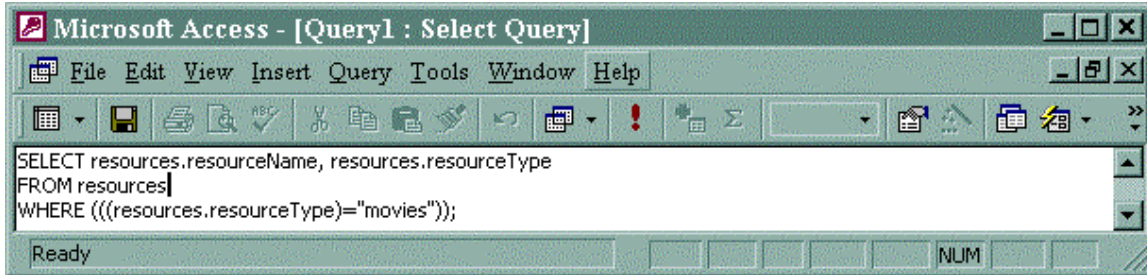
- Using Expressions in Select

Question: How much \$ is tied up in on_hand products?

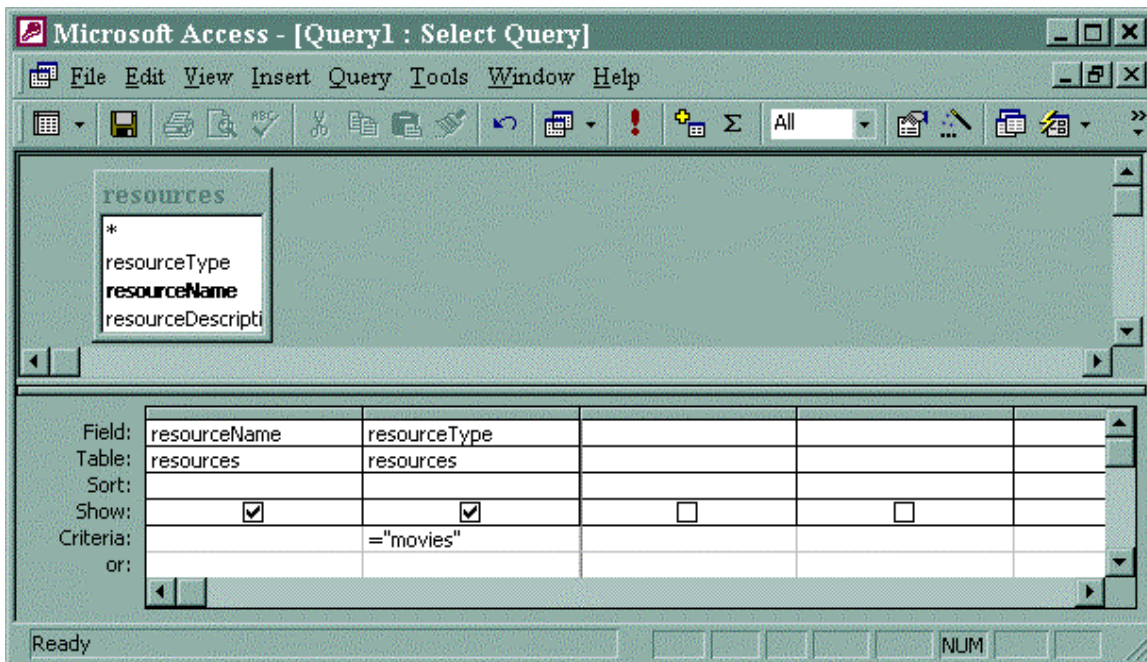
```
Select Product_Name, Unit_Price * On_Hand as Value  
From Products
```

SQL – Viewing in Access

SQL View

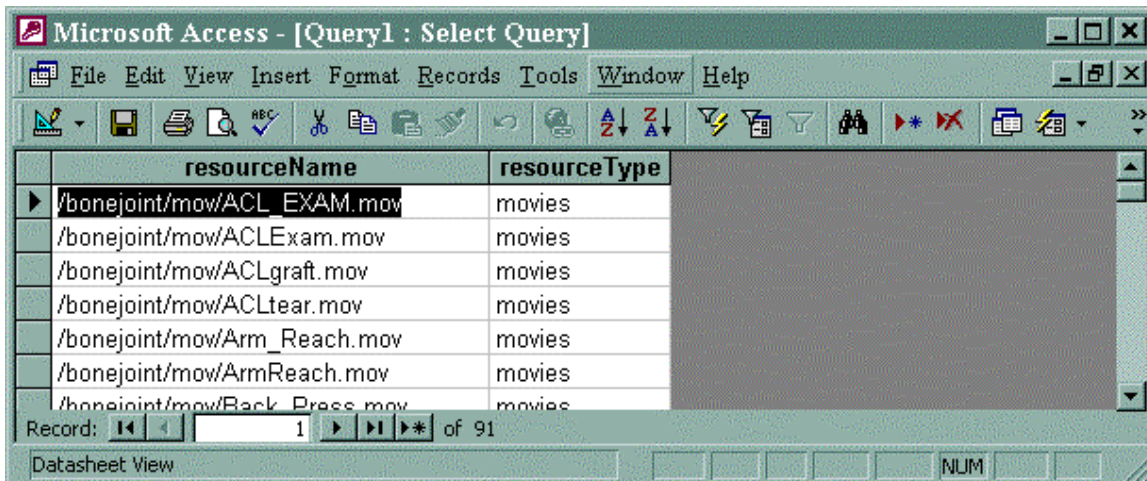


Design View



(QBE: Query-by-Example)

Results View



SQL: Studying it...

- Procedure
 - Introduce Commands: End of class
 - Practice Commands: Classroom preparation activity
 - Discuss Results and Questions: Beginning next class
- See handout...
- Class Prep Activities
 - Log file analysis
 - Log file - a file containing a record of users' activity (i.e., **who, what when**) as they interact with a computer-based application (e.g., a website, a computer game, or a job application).

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Fibromyalgia

[Pain](#) is the most prominent symptom of fibromyalgia. It is generally felt all over,

Internet

SQL: Log File Data for Class Prep

- Arthritis Source Log file - In our case, we will be looking at a log of user activity (i.e., hitData) on the Arthritis Source website during the second week of January in 1996.

WHEN	WHO	WHAT
DATE/TIME	IP ADDRESS	WEB RESOURCE
1/7/96, 2:06:00AM	ts-h08-13-6.ucc.su.oz.au.	/bonejoint/Arthritis.idx.html
1/7/96, 2:06:00AM	ts-h08-13-6.ucc.su.oz.au.	/bonejoint/szzzzzzz1_1.html
1/7/96, 2:06:00AM	ts-h08-13-6.ucc.su.oz.au.	/bonejoint/szzzzzzz1_2.html

