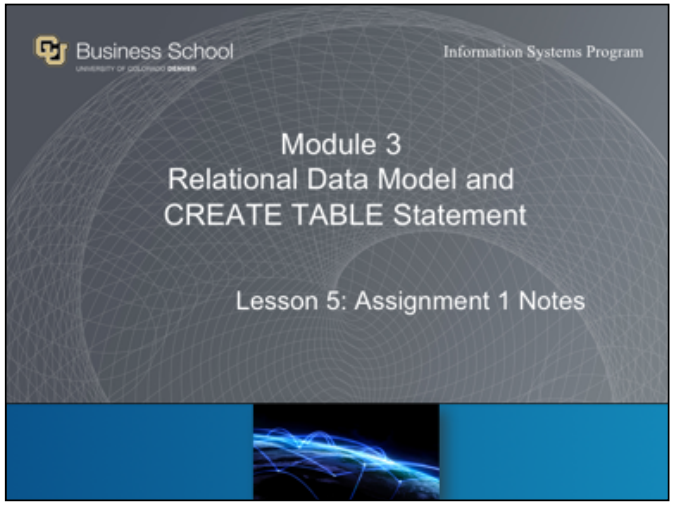


Welcome to Lesson 5 of Module 3 on the relational data model and the CREATE TABLE statement

- Careful study of the relational data model
- This lesson covers details about assignment 1.

Opening question: What university's athletic department is the assignment database loosely derived?

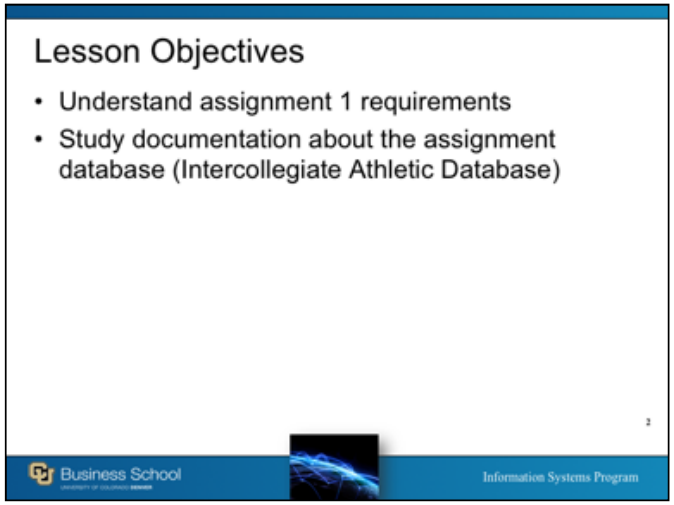
Relational databases are the dominant commercial standard

- Simplicity and familiarity with table manipulation
- Strong mathematical framework
- Lots of research and development

Goals of Lesson 5

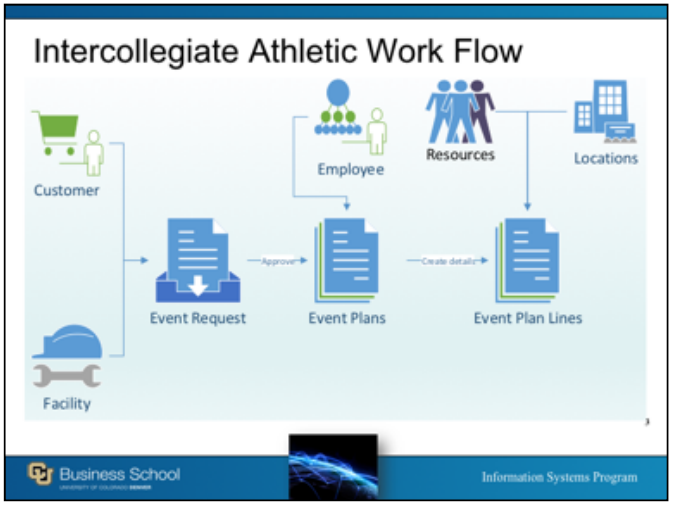
- Install and use Oracle or MySQL
- Write CREATE TABLE statements with correct syntax, appropriate data types, and named constraints
- Execute SQL INSERT statements to populate tables

1



Documentation

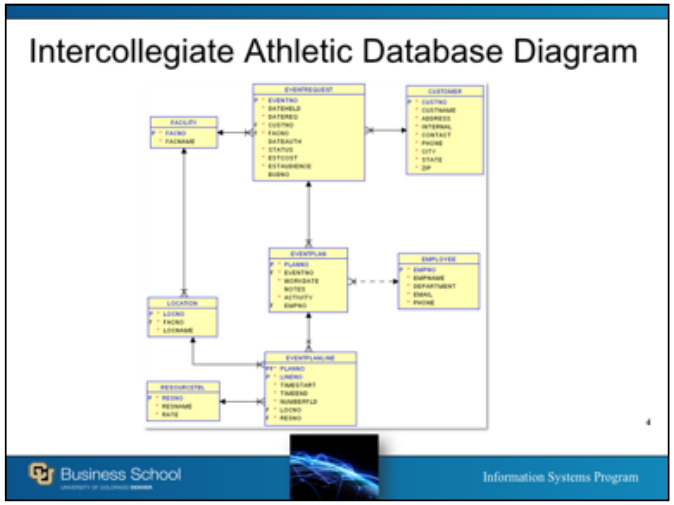
- Work flow diagram
- Relational database diagram
- Sample rows in the background document: not missing values in some columns



Customer initiates event request for facility usage

Event plans created for approved event requests

- Assigned to an employee to manage
- Collection of event plans for setup, operation, and cleanup
- Details specified for allocation of resources to locations in event plan lines for each event plan



Oracle relational database diagram

Based on a student project in the 1990s

Student was an employee of the UW athletic department.

Support requests and planning of events at university athletic facilities.

Moderately complex database: 8 tables, 8 relationships

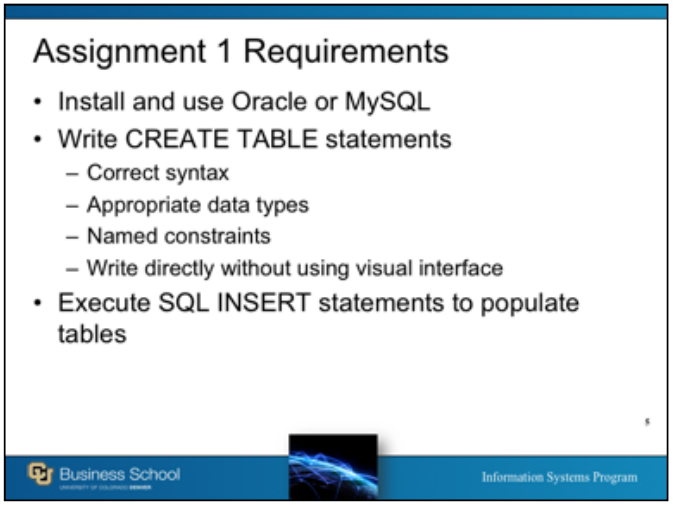
Cycle in relationships: two paths between EventPlanLine and Customer

Combined PK (EventPlanLine)

Used in assignments 1 to 3

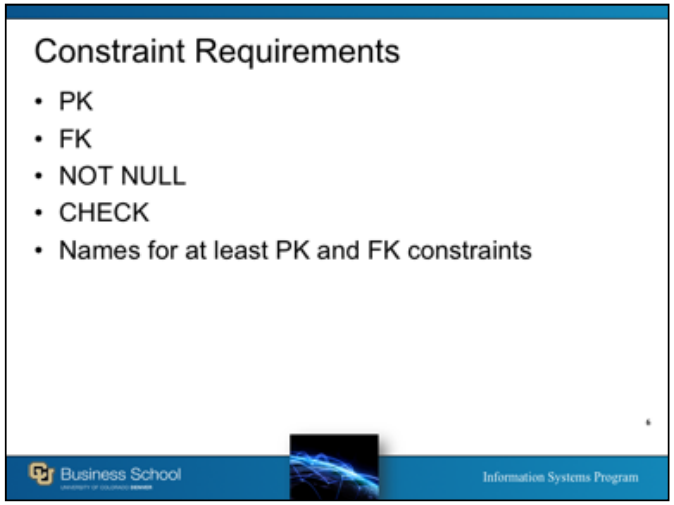
Note changes in design for Oracle

- No BOOLEAN data type: use CHAR(1) for Customer.Internal with single character (Y or N) stored
- Table (ResourceTbl) and column (NumberFld) changes due to reserved words in Oracle SQL
- Data changes in *EventPlanLine.TimeStart* and *EventPlanLine.TimeEnd*: store date and time (DATE data type)



Write statements without using administrator interface

- Poorly written statements
- Must be confident to read and write statements because CREATE TABLE statement is still widely used and relatively portable



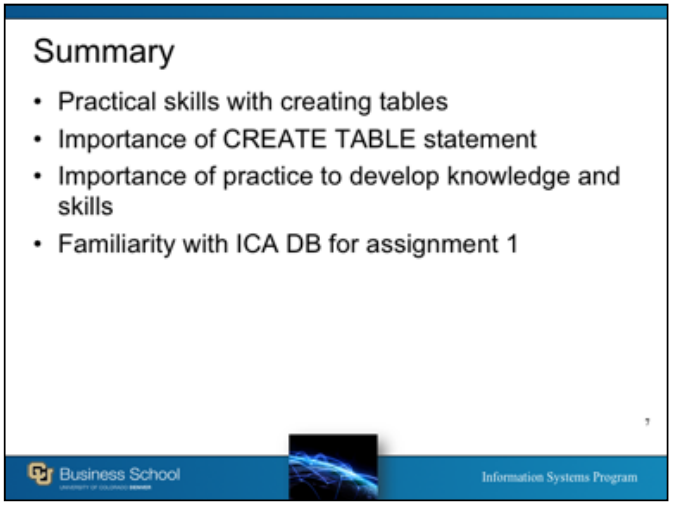
See assignment details

Combined PK for EventPlanLine table

- Must be external
- Combination of PlanNo, LineNo

Most columns have NOT NULL constraints

- Can be inline
- Exceptions: EventPlan.EmpNo, EventRequest.DateAuth, EventRequest.BudNo, EventPlan.Notes



Assignment 1 is very practical.

CREATE TABLE statement is portable and still widely used.

Must practice to develop concepts and skills. Reading lecture notes is not sufficient.

ICA DB will be used for query formulation in assignment 2. Learning tables and relationships is important for query formulation performance.