

## **Introduction to Databases (X-409.1)**

### **Assignment 4 (Due by Class Meeting 6)**

Create a data model for a medium-sized business that uses the common patterns discussed in this module. Use an entity relationship diagram to document your model. Include the following entities and attributes (listed in parentheses):

- Employees (Employee ID, Given Name, Middle Name, Family Name, Birth Date, Pay Grade Code, Pay Grade Name, Home Phone, Business Phone, Mobile Phone, Home Address)
- Customers:
  - Individual Customers (Customer ID, Customer Given Name, Customer Family Name, Business Phone, Mobile Phone, Billing Address, Mailing Address, Shipping Address, Work E-Mail Address)
  - Organizational Customers (Customer ID, Customer Name, Business Phone, Billing Address, Mailing Address, Shipping Address, E-Mail Address, Web URL)
- Suppliers, which can also be customers. (Supplier ID, Supplier Name, Business Phone, Mobile Phone, Billing Address, Mailing Address, Shipping Address)
- Organizational Structure
  - Division (Division ID, Division Name, Division Manager Employee ID, Division Manager Name)
  - Department (Department ID, Department Name, Division ID, Division Name, Department Manager Employee ID, Department Manager Name)
  - Work Group (Work Group ID, Work Group Name, Department ID, Department Name, Work Group Leader Employee ID, Work Group Leader Name, List of Employees Assigned to Work Group)
- Contact Methods – Generalize all the phone numbers, e-mail addresses, and home/shipping/mailing/billing addresses into common Contact Methods.
- Purchase Orders (Supplier ID, Order Date, Purchase Order Number, Item Description, Quantity, Price Each, Item Subtotal [Quantity \* Price Each], Order Status Code)

Note: All physical addresses include Address Line 1, Address Line 2, City, State/Province, Country, Postal Code