

## Homework 1

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### Tools

Many database systems provide tools for database design that support E-R diagrams. These tools help a designer create E-R diagrams, and they can automatically create corresponding tables in a database.

There are also several database-independent data modeling tools that support E-R diagrams and UML class diagrams. The drawing tool Dia, which is available as freeware, supports E-R diagrams and UML class diagrams.

### Homework

Consider a MAIL\_ORDER database in which employees take orders for parts from customers. The data requirements are summarized as follows:

- The mail order company has employees, each identified by a unique employee number, first and last name, and Zip Code.
- Each customer of the company is identified by a unique customer number, first and last name, and Zip Code.
- Each part sold by the company is identified by a unique part number, a part name, price, and quantity in stock.
- Each order placed by a customer is taken by an employee and is given a unique order number. Each order contains specified quantities of one or more parts. Each order has a date of receipt as well as an expected ship date. The actual ship date is also recorded.

Design an entity-relationship diagram for the mail order database and build the design using a data modeling tool such as Erwin or Rational Rose.