

# Database Design

ER Diagramming Conventions

# Objectives

This lesson covers the following objectives:

- Construct ER diagram components that represent entities and attributes according to diagramming conventions

# Purpose

People speak different languages throughout the world, but some signs are understood globally. Guess the meaning of these signs.

## International Signs



## Purpose (cont.)

How well did you do? Did you guess the meaning of most signs?

### International Signs



### Key:

1. Crosswind
2. Roundabout
3. No entry for vehicles carrying more than a certain quantity of explosives or readily inflammable substances
4. Lane for slow vehicles
5. Stop in Brazil
6. Low clearance
7. Mr. Yuk

# Shared Convention

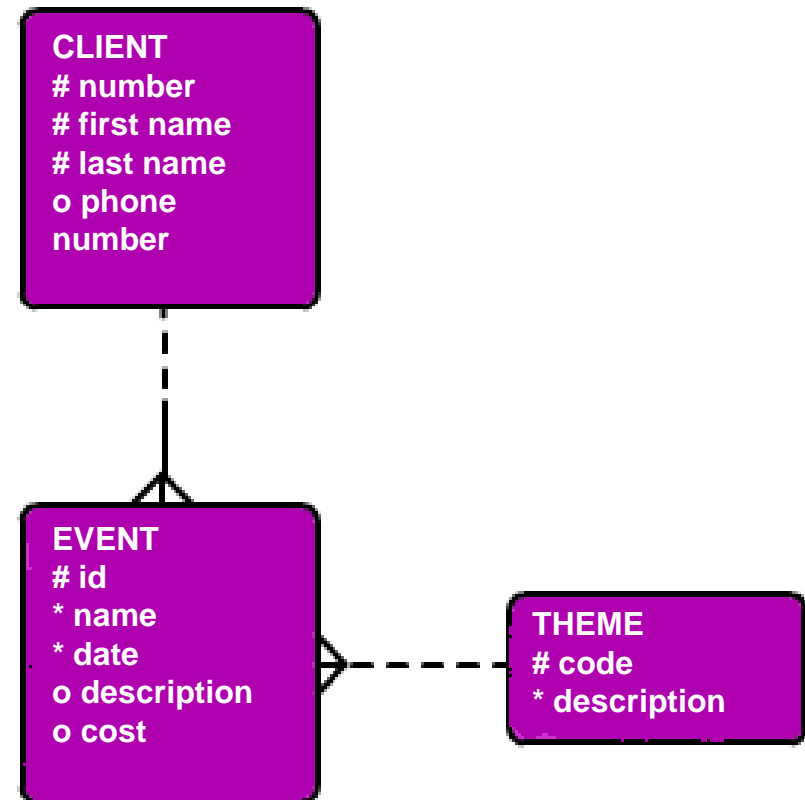
It is efficient to communicate information in a way that can be easily understood by many people.

ER diagramming is like that -- you may say or write things differently because of the way you speak, your accent, and so on, but everyone draws ER diagrams according to the same conventions.



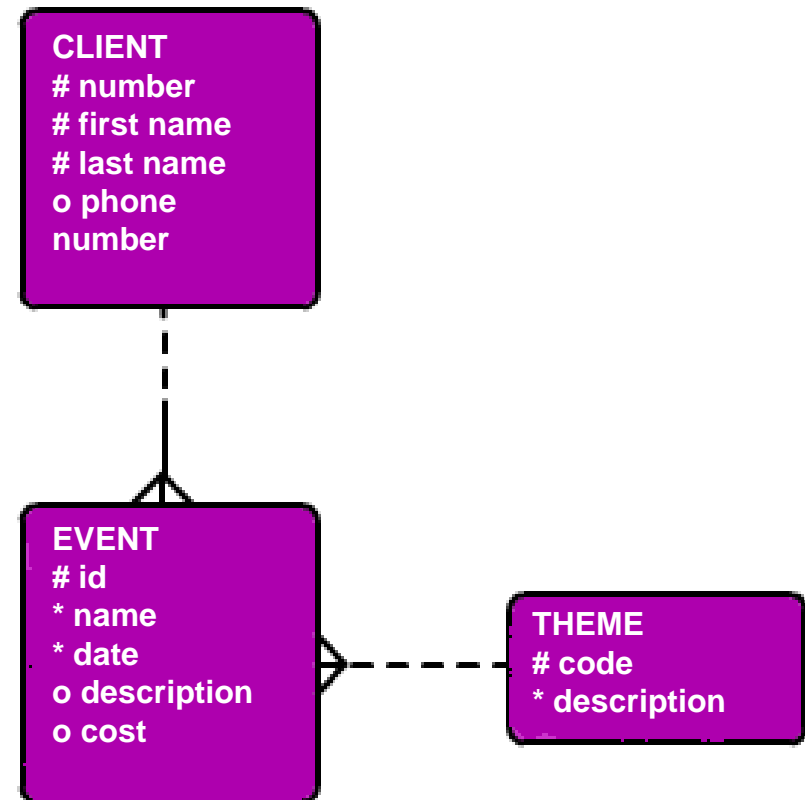
# DJs on Demand: CLIENTs, EVENTs, and TYPEs

"Our client list is growing. We have a lot of repeat business -- customers who like what we've done who ask us to work for them again. We have some very busy customers who can have more than one event going on at the same time.



# DJs on Demand: CLIENTs, EVENTs, and TYPEs (cont.)

Each partner has some specialty or expertise, so when it's appropriate, we like to classify our events by theme to help us assign the right person (partner) to the job. An event theme can be a beach party, medieval, carnival, retro sixties or seventies, etc. We keep adding event themes as we go."

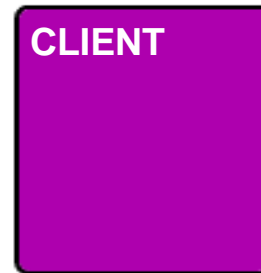


# ER Drawing Conventions

Entities are represented by softboxes.

Entity names go in the softboxes.

Entity names are always singular and written with all capital letters.





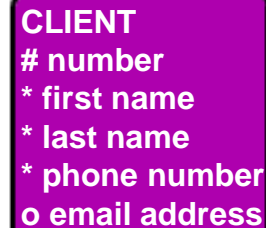
# Drawing Conventions

Attributes are listed under the entity names.

Mandatory attributes are marked with an asterisk: “\*”

Optional attributes are marked with a circle: “o”

Unique identifiers are marked with a hash sign: “#”



Entity CLIENT diagram showing attributes: # number, \* first name, \* last name, \* phone number, and o email address.

```
CLIENT
# number
* first name
* last name
* phone number
o email address
```



Entity EVENT diagram showing attributes: # id, \* name, \* date, \* cost, and \* description.

```
EVENT
# id
* name
* date
* cost
* description
```



Entity THEME diagram showing attributes: # code and \* description.

```
THEME
# code
* description
```

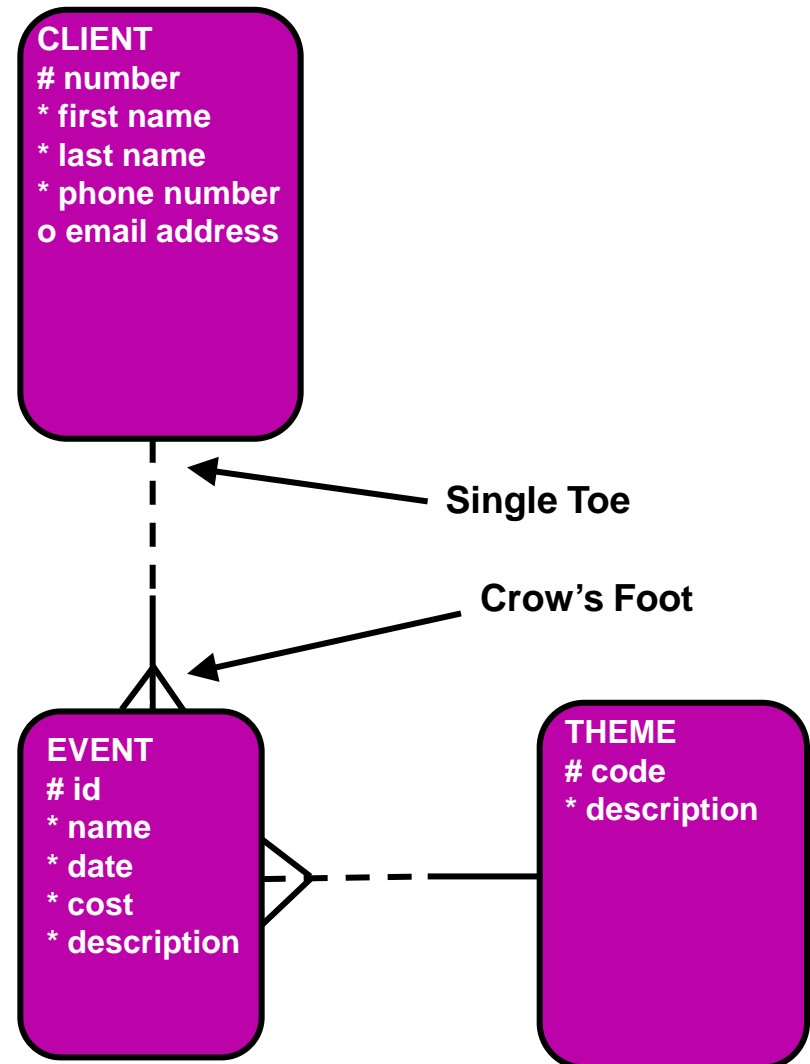
## Drawing Conventions (cont.)

Relationships are lines that connect entities.

These lines are either solid or dashed.

These lines terminate in either a “single toe” or a “crow’s foot” at the end of each entity.

You will learn the specific details about relationship lines in the next lesson.



# Terminology

Key terms used in this lesson included:

- Softbox

# Summary

In this lesson, you should have learned how to:

- Construct ER diagram components that represent entities and attributes according to diagramming conventions