Database Design

6-2: Normalization and First Normal Form

Practice Activities

Objectives

- Define the purpose of normalization in database models
- Define the rule of First Normal Form in the normalization process
- Determine if an entity conforms to the rule of First Normal Form
- Convert an entity to First Normal Form if needed

Vocabulary

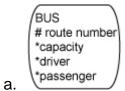Identify the vocabulary word for each definition below.

	The outcome of the first step of database normalization. 1NF eliminates repeating groups by putting each into a separate table and connecting them with a 1:M relationship
	A series of steps followed to obtain a database design that allows for efficient access and storage of data in a relational database. These steps reduce data redundancy and the chances of data becoming inconsistent.

Try It / Solve It

1. When checking a database model for first normal form, what are you doing exactly?

2. What is the rule of 1NF in the normalization process?

3. Check to see if each ERD is in 1NF. If not, make the necessary changes to correct it.

a.
```
BUS
# route number
*capacity
*driver
*passenger
```

b.
```
DORMITORY        located on    CAMPUS
# number                       # id
* address                      * name
*resident        have
```

c.
```
STUDENT
# id
*first name
*last name
```