

## Supertypes and Subtypes

### Objectives

- Define and give an example of a subtype
- Define and give an example of a supertype
- State the rules relating to entities and subtypes; give examples of each
- Apply the rules of supertype and subtype by evaluating the accuracy of ER diagrams that represent them
- Apply the rules of supertype and subtype and include them in a diagram when appropriate

### Vocabulary

Directions: Identify the vocabulary word for each definition below.

1. \_\_\_\_\_ Treating all parts or aspects without omission.
2. \_\_\_\_\_ A means of classifying an entity that has subtypes.
3. \_\_\_\_\_ Something an entity may be split into based on common attributes and/or relationships.
4. \_\_\_\_\_ A relationship that presents choices which are unable to be true at the same time.

### Try It / Solve It

1. Identify the supertype and subtype of the entity listed below.

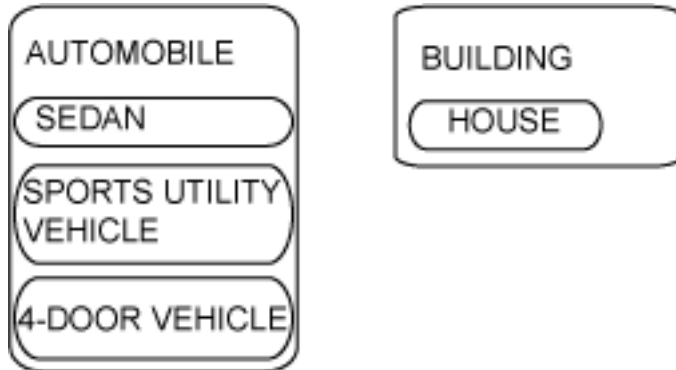
DISABILITY  
Visual Impairment  
Hearing Impairment  
Amputation  
Paralysis

2. For each rule stated indicate if the rule is applicable to supertypes or subtypes.

\_\_\_\_\_ They have several attributes in common  
\_\_\_\_\_ They inherit all attributes and relationships of the entity  
\_\_\_\_\_ Never exists alone  
\_\_\_\_\_ Create one when a group of instances of an entity have special properties

3. Name three things you consider when considering supertypes and subtypes.

4. Find the incorrect subtypes in the illustration. Explain why you think the subtype is incorrect. Adjust the model to improve it.



5. Read the following scenario and construct an ERD that contains at least two subtypes of the entity **PRODUCT**. Show clearly which attributes belong to the entity supertype, and which belong to one of the subtypes. Identify a UID for the entity.

“Our shops sell several kinds of womens’ clothing, including dresses, skirts and blouses. Of course each product has a name, a description and a price. Oh, and sizes too: all products have a waist size. Dresses and skirts have a hem length but blouses don’t. Dresses and blouses have a bust size; skirts don’t.”

6. (Optional Practice: Global Fast Foods)

This practice is step 2 in the Global Fast Foods project.