ORACLE
Academy

Database Design
6-1: Artificial, Composite, and Secondary UIDs
Practice Activities

Objectives

- Define the different types of unique identifiers (UIDs)
- Define a candidate UID and explain why an entity can sometimes have more than one candidate UID
- Analyze business rules and choose the most suitable primary UID from the candidates
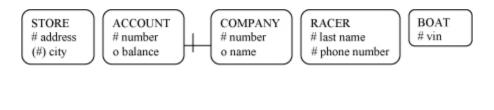- Recognize and discuss the issues of identification in the real world

Vocabulary

Identify the vocabulary word for each definition below.

	Unique identifier
	A UID that is a single attribute
	A UID that is a combination of attributes
	A UID that does not occur in the natural world but is created for identification purposes in a system
	One of several UIDs that could identify something
	A candidate UID that is the primary identifier of something
	A candidate UID that also identifies something, but is not the primary UID

Try It / Solve It

1. Match the type of Unique Identifier to the entity.

    a. Simple UID

    b. Composite UID

    c. Composite UID comprising an attribute and a relationship

    d. Primary Key & Secondary Key

STORE	ACCOUNT	COMPANY	RACER	BOAT
# address	# number	# number	# last name	# vin
(#) city	o balance	o name	# phone number	

_____   _____   _____   _____

2. Consider an entity for Library Member. Sometimes an entity can have more than one candidate UID. Describe a scenario where you would want more than one candidate UID for a Library Member – why would you want to find the member in the database using alternative information?

3. Describe how you would identify the entities listed below, making up any attributes and relationships you consider appropriate. For example, for the Student entity you may say that the UID is comprised of the first name, last name, and address. Or you might suggest that the Student entity contains an artificial UID called student number.

    a. A city

    b. A contact person for a customer

    c. A train

    d. A road

    e. A financial transaction (for example: transfer funds)

    f. An award (for example: movies)

    g. A painting

4. Identify one of the issues with respect to a national identification system. Provide your point of view on the issue.

5. You have previously reviewed the video store business requirements stated below:

"I'm the owner of a small movie rental store. We have over 3,000 DVDs that we need to keep track of.

"Each of our DVDs has a disk number. For each movie, we need to know its title and category (e.g., comedy, suspense, drama, action, war, or sci-fi). Yes, we do have multiple copies of many of our movies. We give each movie a specific ID, and then we track which movie a disk contains. A disk may be either High Definition (HD) or BlueRay format. We always have at least one disk for each movie we track, and each disk is always a copy of a single, specific movie. Our disks are very big, although we don't have any movies that require multiple disks."

For this activity read the new business requirements below and resolve the M:M relationship. Identify UIDs for all the entities that require multiple disks.

"We are frequently asked for movies starring specific actors. John Wayne and Katherine Hepburn are always popular. So we'd like to keep track of the star actors appearing in each movie. Not all of our movies have star actors. Customers like to know each actor's "real" birth name and date of birth. We track only actors who appear in the movies in our inventory.

"We have lots of customers. We only rent DVDs to people who have joined our DVD club. To belong to our club, they must have good credit. For each club member, we'd like to keep the first and last name, current phone number, and current address. And, of course, each club member has a membership number.

"Then we need to keep track of what DVDs each customer currently has checked out. A customer may check out multiple DVDs at any given time. We just track current rentals. We don't keep track of any rental histories."