



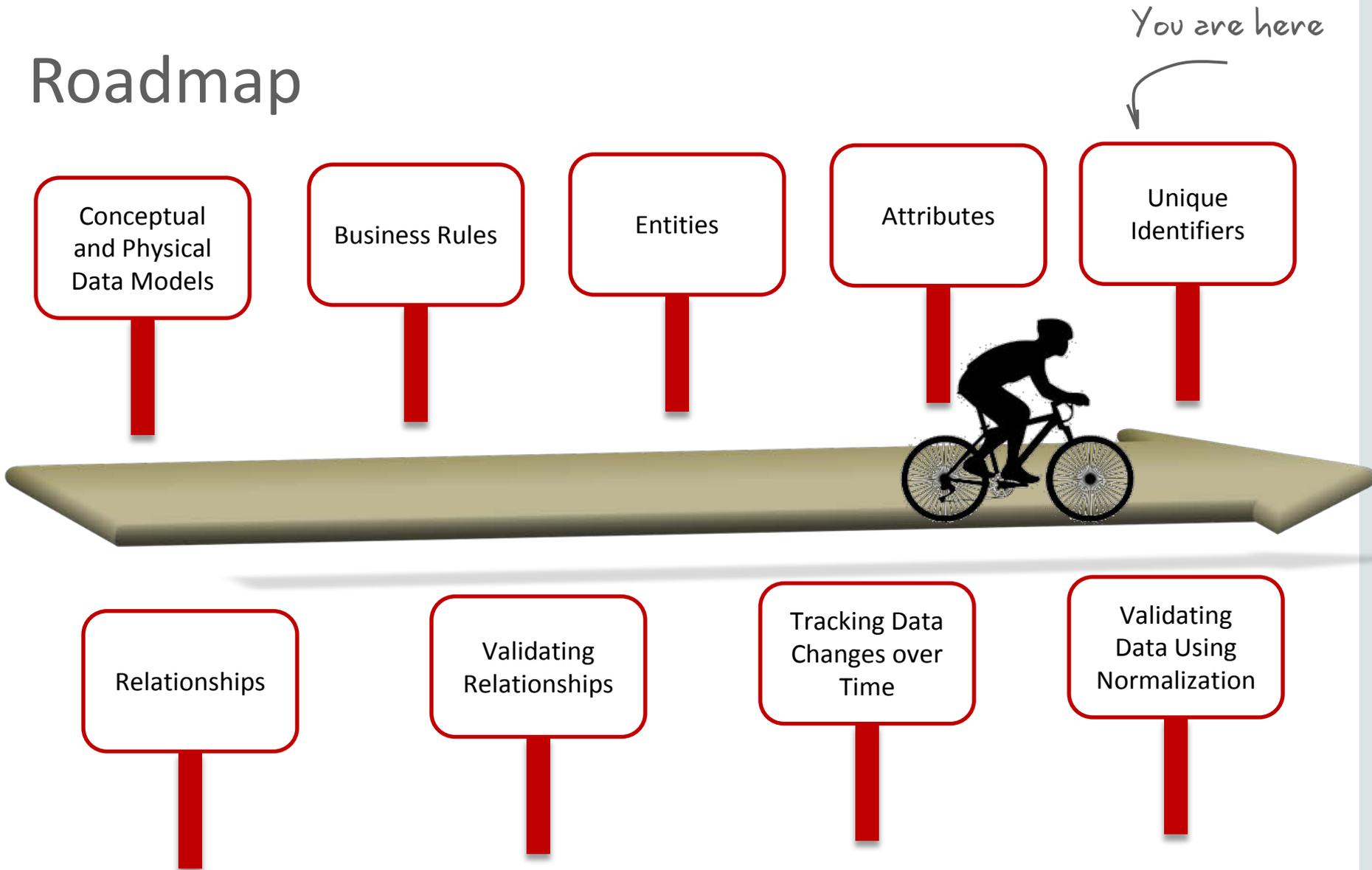
Database Foundations

3-5

Unique Identifiers



Roadmap



Objectives

This lesson covers the following objectives:

- Identify unique identifiers (UIDs)
- Identify candidate unique identifiers
- Identify artificial unique identifiers

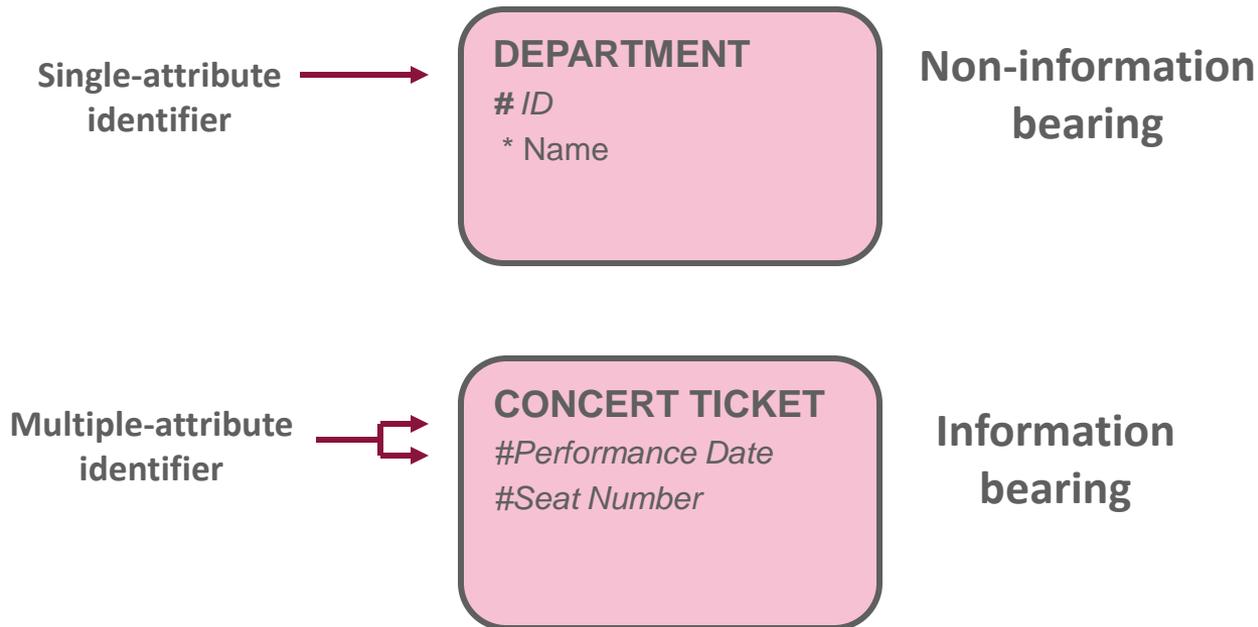


Unique Identifiers

- An identifier is an attribute of an entity that meets the following rules:
 - It is unique across all instances of the entity.
 - It has a non-NULL value for each instance of the entity for the lifetime of the instance.
 - It has a value that never changes for the lifetime of the instance.
- A UID is a special attribute or group of attributes that uniquely identifies a particular instance of an entity.

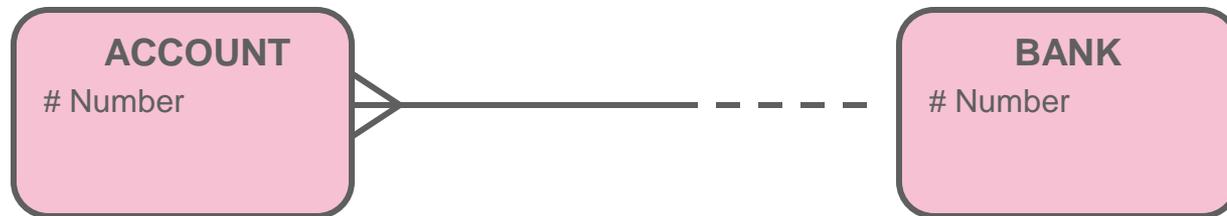
Unique Identifier: Examples

Each entity must have a unique identifier. Otherwise, it is not an entity.

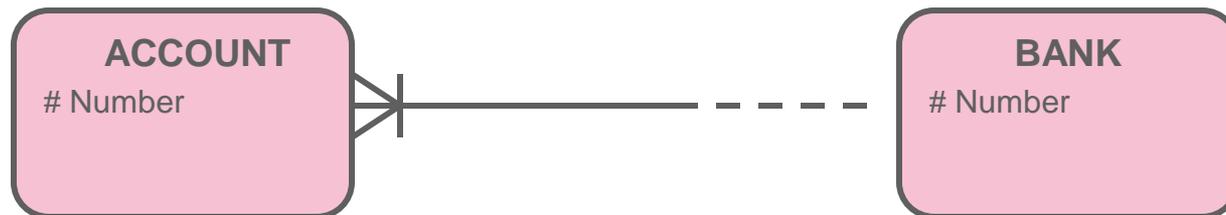


Identifying Relationships

- What is the UID of the ACCOUNT entity?

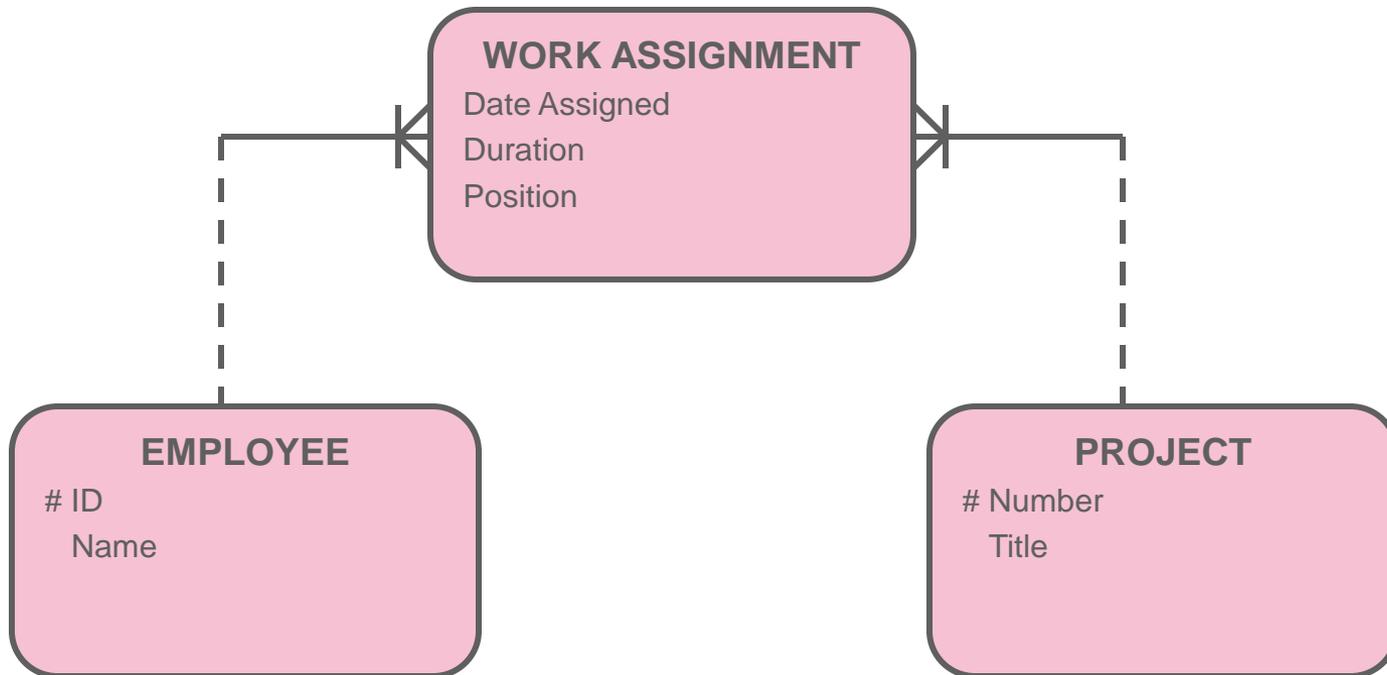


- The UID requires both the ACCOUNT Number and the relationship between BANK and ACCOUNT .



Identifying Relationships with Multiple Entities

An entity can be uniquely identified through multiple relationships.



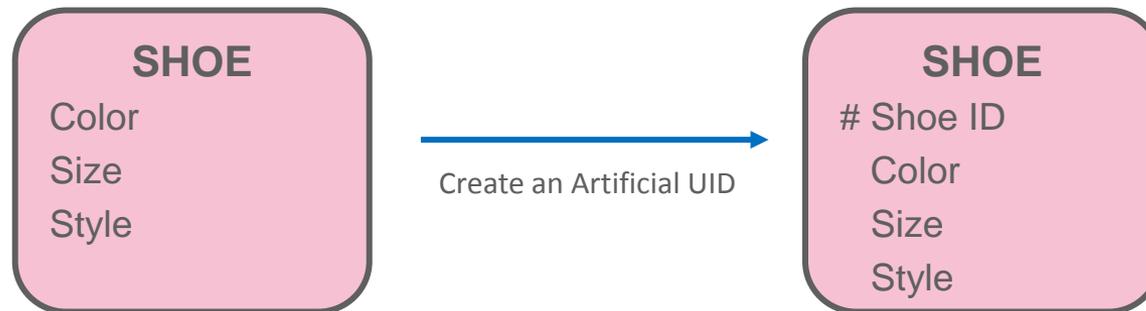
Non-Identifying Relationship

In a non-identifying relationship between two entities, the relationship is not required to be part of the UID.



Artificial Unique Identifier

An artificial UID is made from data that is assigned or generated by the system.



Case Scenario

MEMBER

First Name
Last Name
Street Address

How can you uniquely identify a member?

Can you use a combination of first name and last name? Only if you are sure that the combination is unique.

MEMBER

First Name
Last Name
Street Address

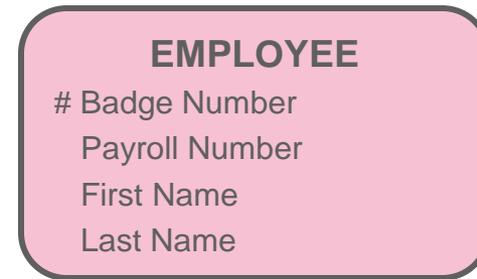
MEMBER

Member ID
First Name
Last Name
Address

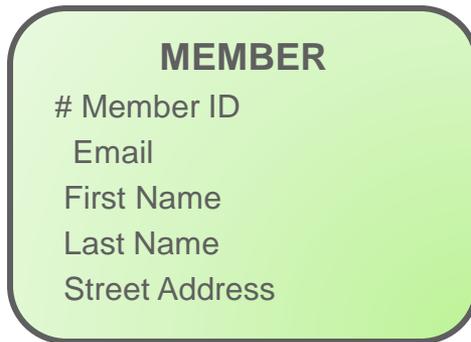
First Name and Last Name can be the same for more than one member. So, let's create an artificial UID called Member ID.

Candidate Unique Identifiers

- An entity can have more than one UID.
- Candidate UIDs:
 - Badge number
 - Payroll number
- Select one candidate UID as the primary UID and select the others as secondary UIDs.



Case Scenario



Member ID has been chosen as the primary UID in the Member entity. Can you identify the candidate UID?

Email can be chosen as the candidate UID because email is unique for every member.



Summary

In this lesson, you should have learned how to:

- Identify unique identifiers
- Identify candidate UIDs
- Identify artificial UIDs



