Assignment 2: Relational Model

EPPS 6354: Information Management

Relational Model Terms

- relation – stores information about a certain aspect in the database
- instance – refers to the content of a relation at a specific point of time

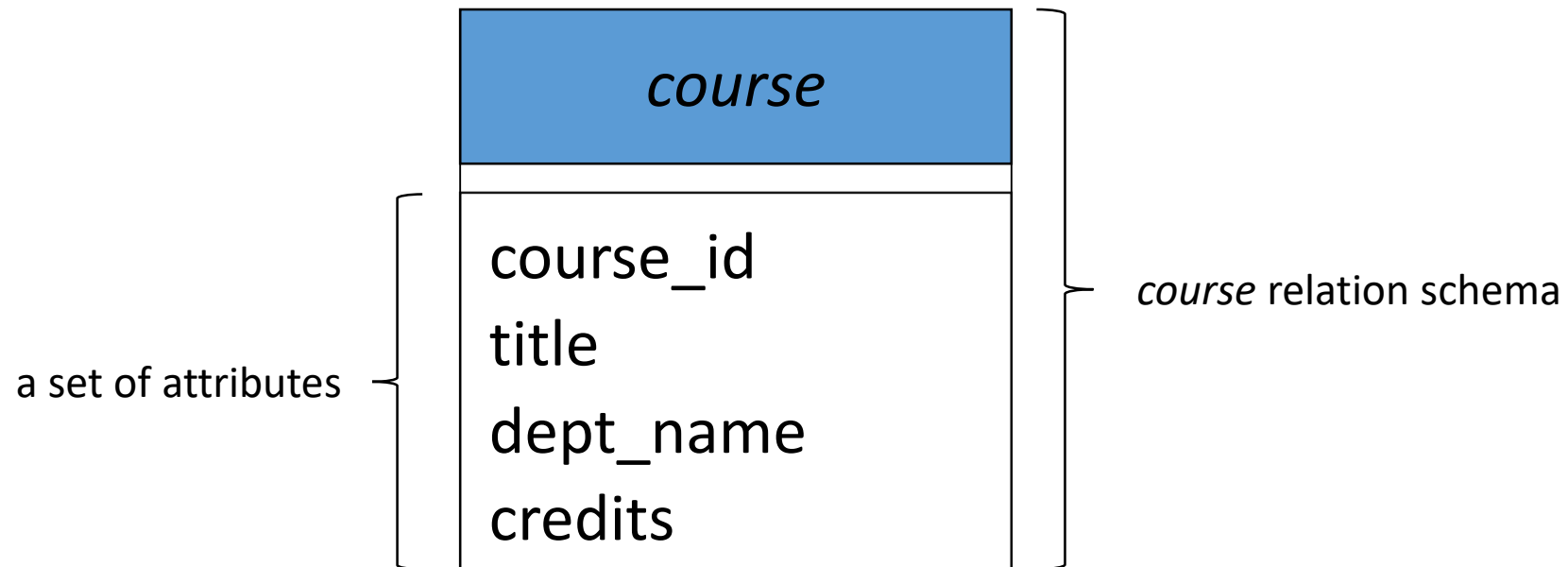| course_id	title	dept_name	credits
BIO-101	Introduction to Biology	Biology	4
BIO-301	Genetics	Biology	4
CS-101	Introduction to Computer Science	Computer Science	4
CS-190	Game Design	Computer Science	4
CS-315	Robotics	Computer Science	3
EE-181	Introduction to Digital Systems	Electrical Engineering	3
FIN-201	Investment Banking	Finance	3

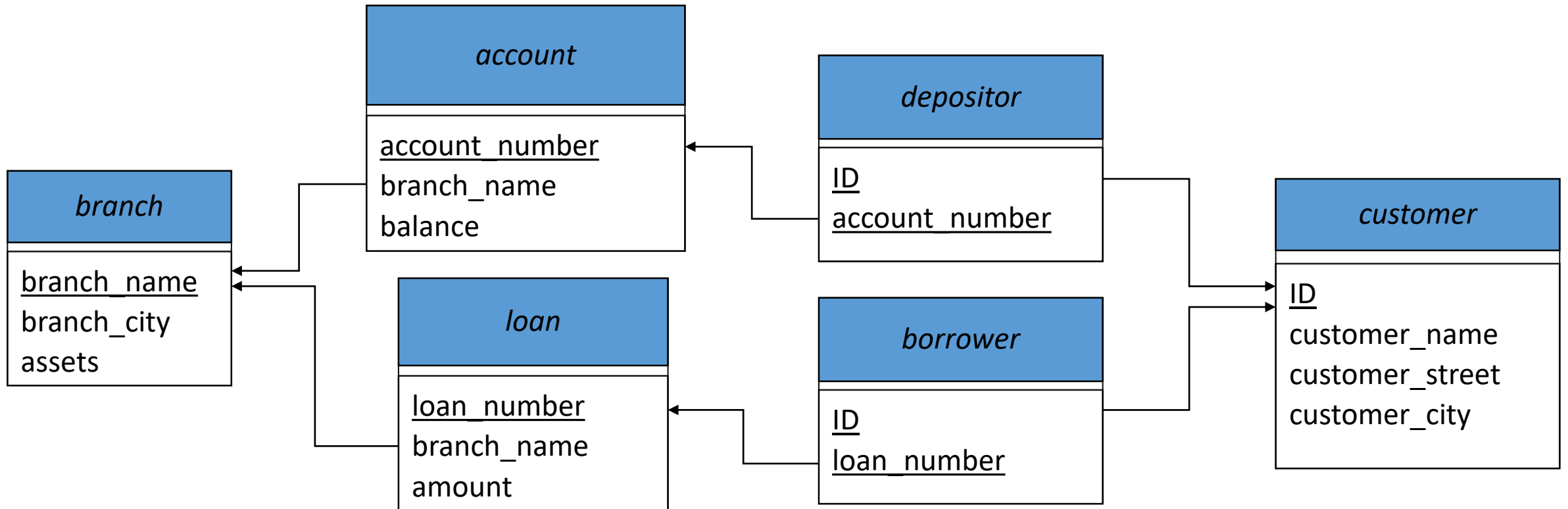instance of *course* with 7 courses

course relation

Relational Model Terms

- relation schema – lists a set of attributes for a specific relation, i.e., provides information describing a relation as a blueprint for the table

course (course_id, title, dept_name, credits)
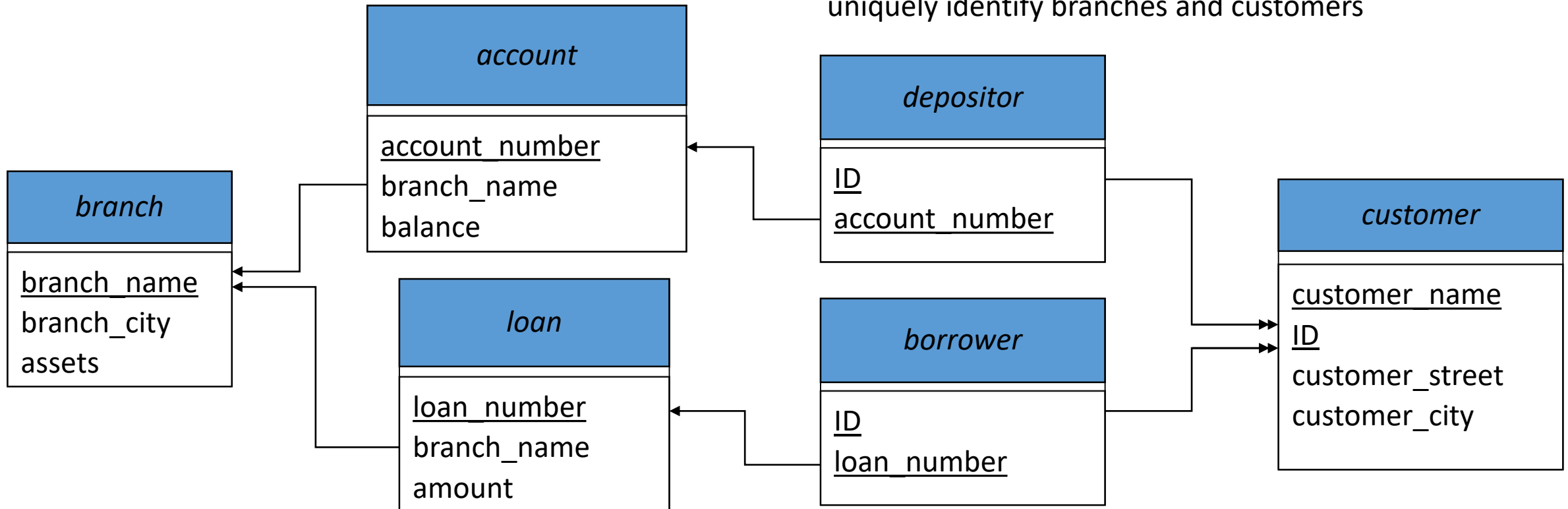
Schema diagram for the bank database

*Primary keys are underlined
*Foreign-key constraints are arrows from the referencing relation to the primary key of the reference relation

Schema diagram for the bank database

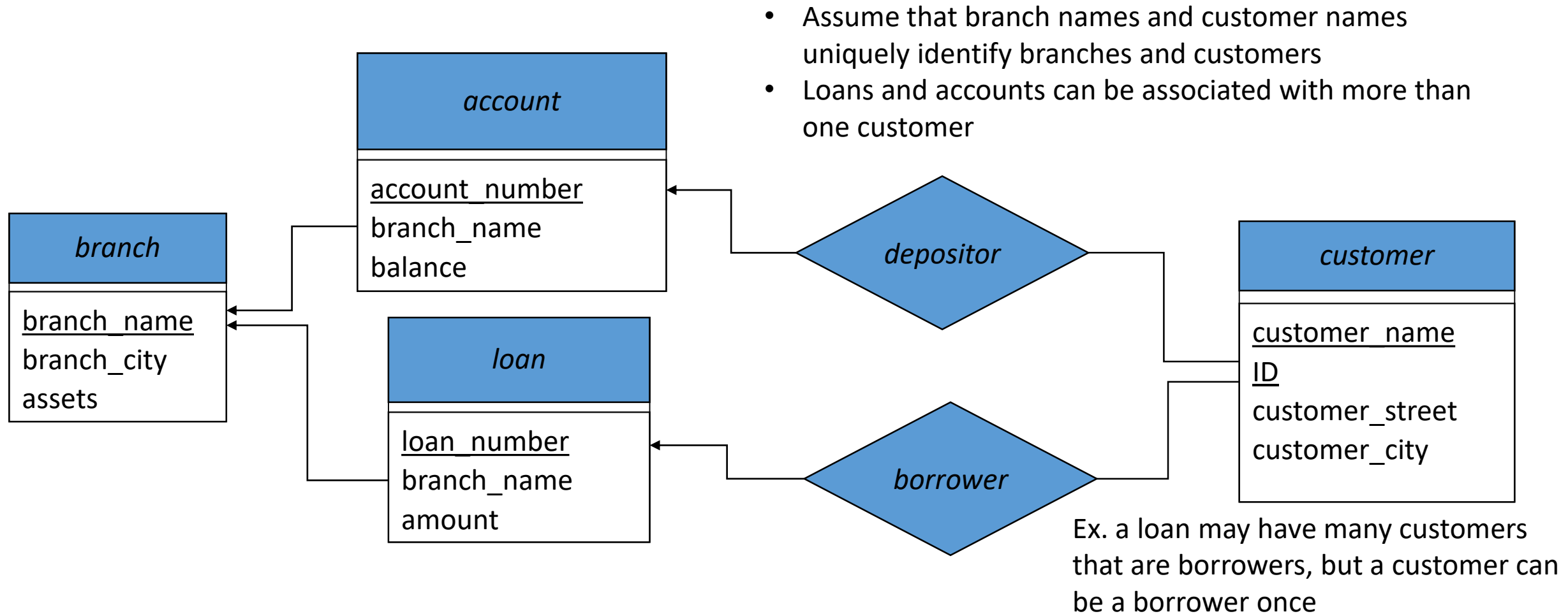- Assume that branch names and customer names uniquely identify branches and customers

*Primary keys are underlined
*Foreign-key constraints are arrows from the referencing relation to the primary key of the reference relation
*Referential integrity constraint identified with two-headed arrow

Schema diagram for the bank database

- Assume that branch names and customer names uniquely identify branches and customers
- Loans and accounts can be associated with more than one customer

Ex. a loan may have many customers that are borrowers, but a customer can be a borrower once

*Primary keys are underlined
*Foreign-key constraints are arrows from the referencing relation to the primary key of the reference relation