EPPS 6354

Santhoshi Rishitha

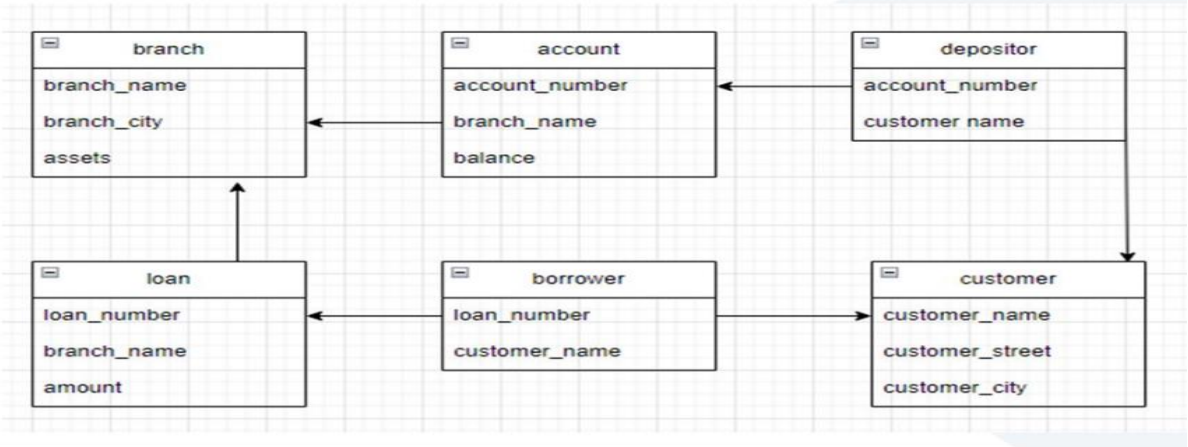
Assignment 2

1.What are the differences between relation schema, relation and instance? Give an example using the university database to illustrate.

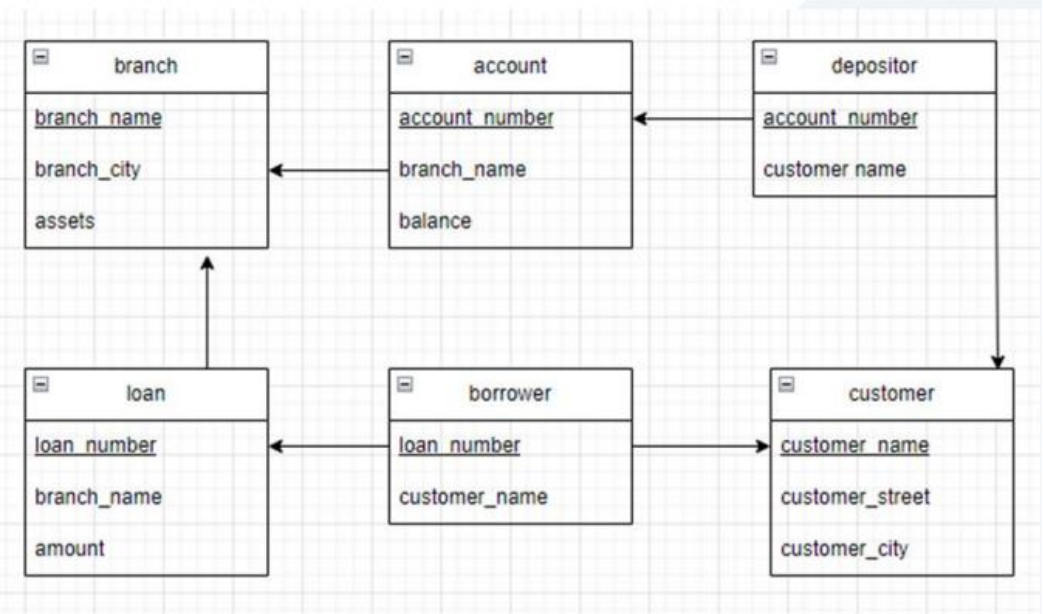
- A relational schema describes a table's properties, columns, and data types. It defines the structure of the table but does not include the data. In the university database relational structure, the "Students" table includes "student_id" (a unique identifier for each student), "name" (the student's name), and "major" (the stated major).
- Relationship: A relationship is a table whose tuples (rows) adhere to the relational schema. In certain database systems, a relation is also known as a "array". For instance, the university database connection "Students" has rows like (1, "John Wick", "Comp. Science") and (2, "Sam Doe", "Biology").
- An event is a collection of data that correlates to a connection graph and reflects the current status of the relationship. This is sometimes referred to as a "table event" or "table state". The present instance of the relation "Students" has tuples like (1, "John Wick", "Comp Science") and (2, "Sam Doe", "Biology").

2.Draw a schema diagram for the following bank database:

branch(branch_name, branch_city, assets)
customer (ID, customer_name, customer_street, customer_city)
loan (loan_number, branch_name, amount)
borrower (ID, loan_number)
account (account_number, branch_name, balance)
depositor (ID, account_number)



3. Consider the above bank database. Assume that branch names (branch_name)and customer names (customer_name)uniquely identify branches and customers, but loans and accounts can be associated with more than one customer.



- **i. What are the appropriate primary keys? (Underline each in diagram)**

- **ii. Given your choice of primary keys, identify appropriate foreign keys.**

- account(branch_name)
- depositor(customer_name)
- borrower(customer_name)
- loan(branch_name)