JP ADJADEH

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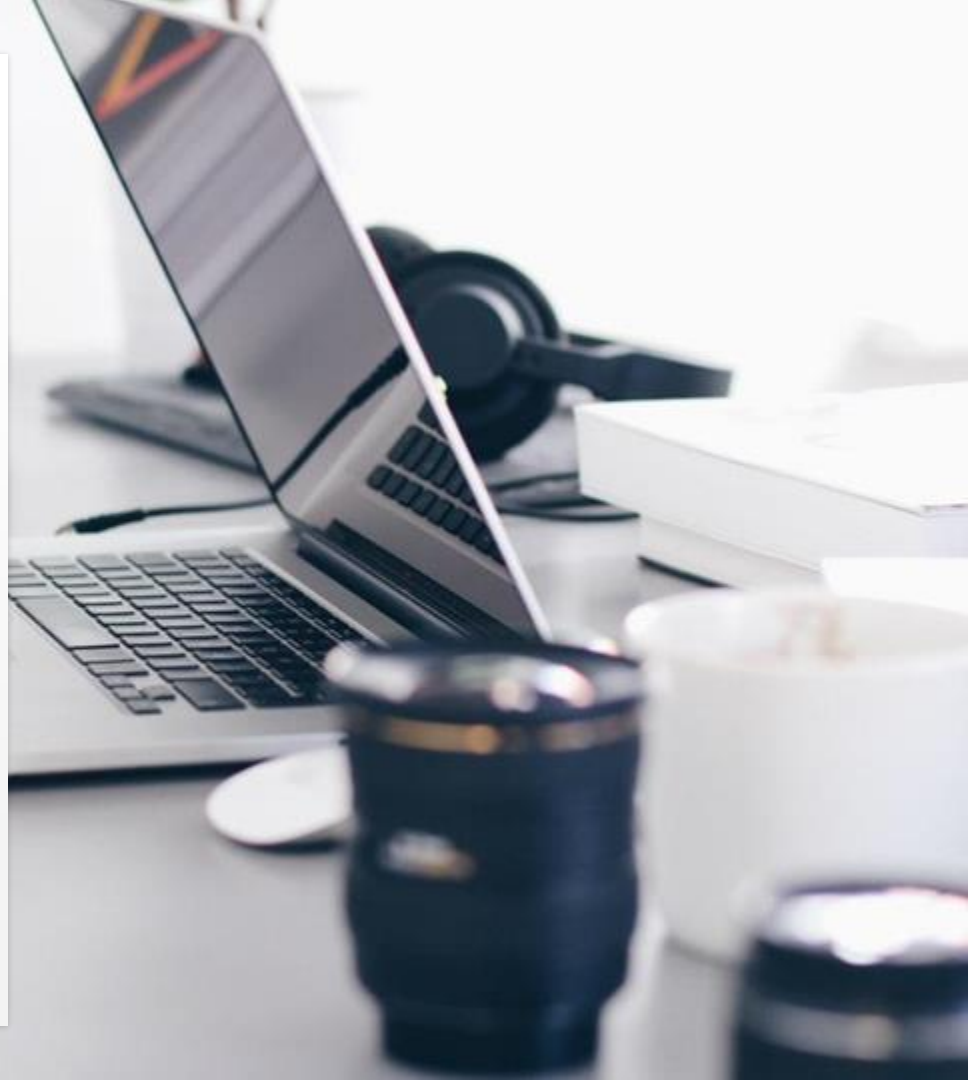


Relation Schema (Schema)

- A relation schema defines the structure of a relation (table) in a database.
- It includes the name of the relation and the attributes (columns) with their data types.
- A schema does not contain data; it is only a blueprint of how data should be stored.

Student(student_id: INT, name: VARCHAR, major: VARCHAR, year: INT)

Relation (Table)

- A relation refers to a table in a relational database.
- It consists of rows (tuples) that store actual data according to the schema.
- A relation can be thought of as an implementation of the relation schema.

Relation (Table)

- The Student relation (table) follows the schema and can store multiple student records.

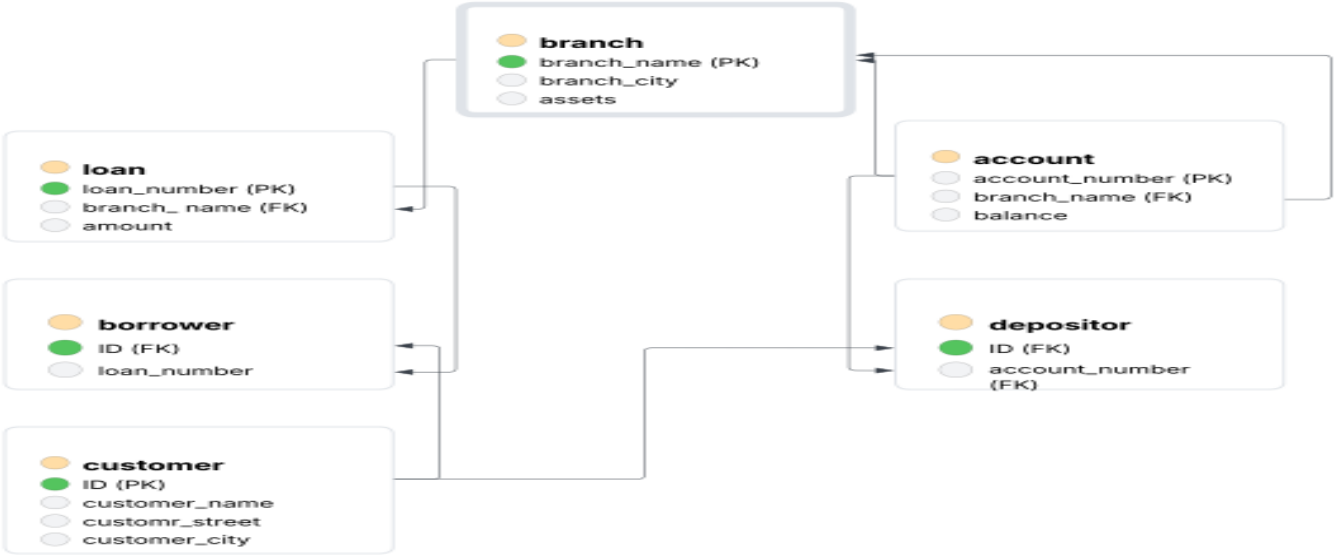
student_id	name	major	year
101	Alice Smith	Computer Science	2
102	Bob Johnson	Mathematics	3

Instance (Snapshot)

- A relation instance refers to the actual data stored in a relation (table) at a given point in time.
- The instance changes as data is inserted, updated, or deleted.
- A relation can have multiple instances over time as the data evolves.

student_id	name	major	year
101	Alice Smith	Computer Science	2
102	Bob Johnson	Mathematics	3
104	JP Adjadeh	Political Science	2

Schema


branch
branch_name (PK)
branch_city
assets
loan
loan_number (PK)
branch_ name (FK)
amount
account
account_number (PK)
branch_name (FK)
balance
borrower
ID (FK)
loan_number
depositor
ID (FK)
account_number (FK)
customer
ID (PK)
customer_name
customr_street
customer_city

Question 3

PRIMARY KEY

- Branch: branch_name
- Customer: customer_name
- Loan: loan_number
- Account: account_number
- Borrower: customer_name, loan_number
- Depositor: customer_name, account_number

Question 3

FOREIGN KEY

- Loan: branch_name
- Account: branch_name
- Borrower: loan_number
- Borrower: loan_number
- Customer: customer_name
- Loan: loan_number
- Depositor: customer_name

Thanks!

Any questions?

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