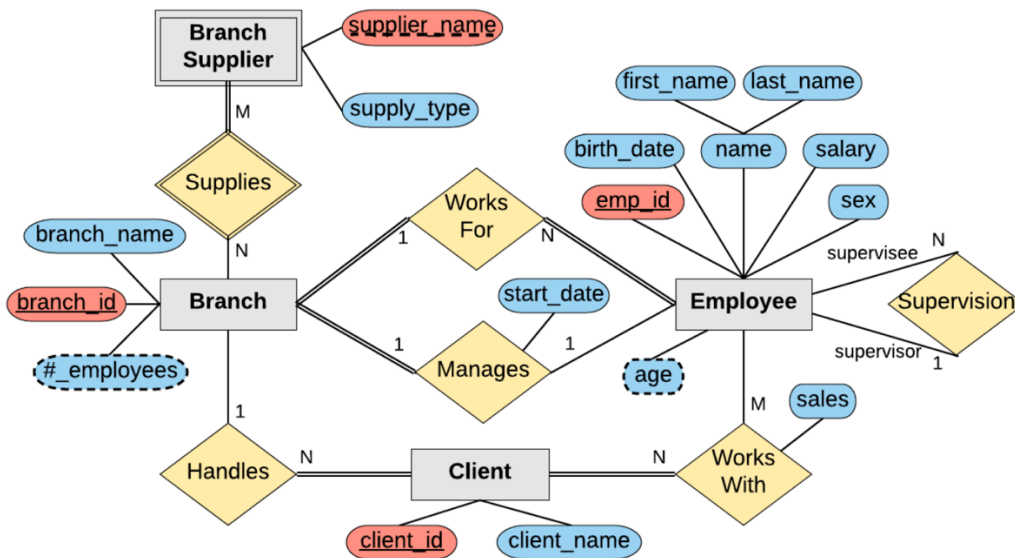# DataBaseSystem report

Lecture 9

Date: 2021.10.29.

3rd grade, department of computer science

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Perform seven steps explained in this lecture and map the E-R Diagram into relation schemas

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・ Step 1: Strong entity types and single valued attributes

Branch(branch_id, branch_name)

Client(client_id, client_name)

Employee(emp_id, birth_date, first_name, last_name, salary, sex)

・ Step 2: Weak Entity Type and single Value Attribute

Branch_Supplier(branch_id, supplier name, supply_type)

・ Step 3: Binary 1:1 relationship Type

Branch(branch_id, branch_name, Manager, start_date)

- **Step 4: Regular binary 1:N relationship type**

Client(client_id, client_name, cb_id)

Employee(emp_id, birth_date, first_name, last_name, salary, sex, eb_id)

Employee(emp_id, birth_date, first_name, last_name, salary, sex, supervisee_id)

- **Step 5: Binary M:N relationship type**

Supplies(branch_id, supplier_name)

Works_With(emp_id, client_id, sales)

- **Step 6: Ternary or higher relationship types** X

- **Step 7: Multi-valued attribute** X

Result

Branch(branch_id, branch_name, Manager, start_date)

Client(client_id, client_name, cb_id)

Employee(emp_id, birth_date, first_name, last_name, salary, sex, eb_id, supervisee_id)

Branch_Supplier(branch_id, supplier name, supply_type)

Supplies(branch_id, supplier_name)

Works_With(emp_id, client_id, sales)