

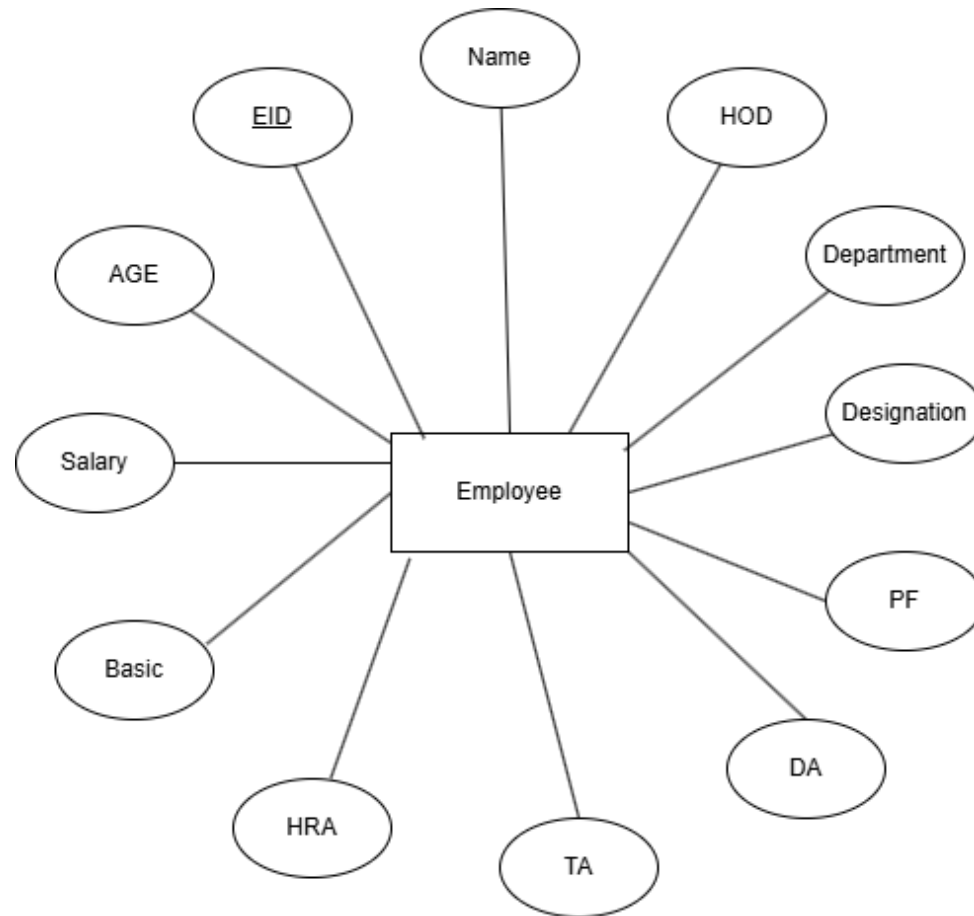


NORMALIZATION

CRYSTAL FERNANDES

CURRENT TABLE WITHOUT NORMALIZATION

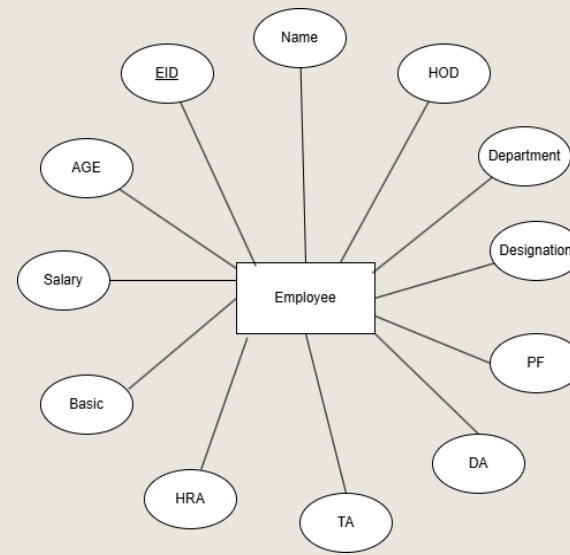
EMPLOYEE (EID, NAME, AGE, SALARY, BASIC, HRA, TA, DA, PF, DESIGNATION, DEPARTMENT, HOD)



PERFORMING 1NF

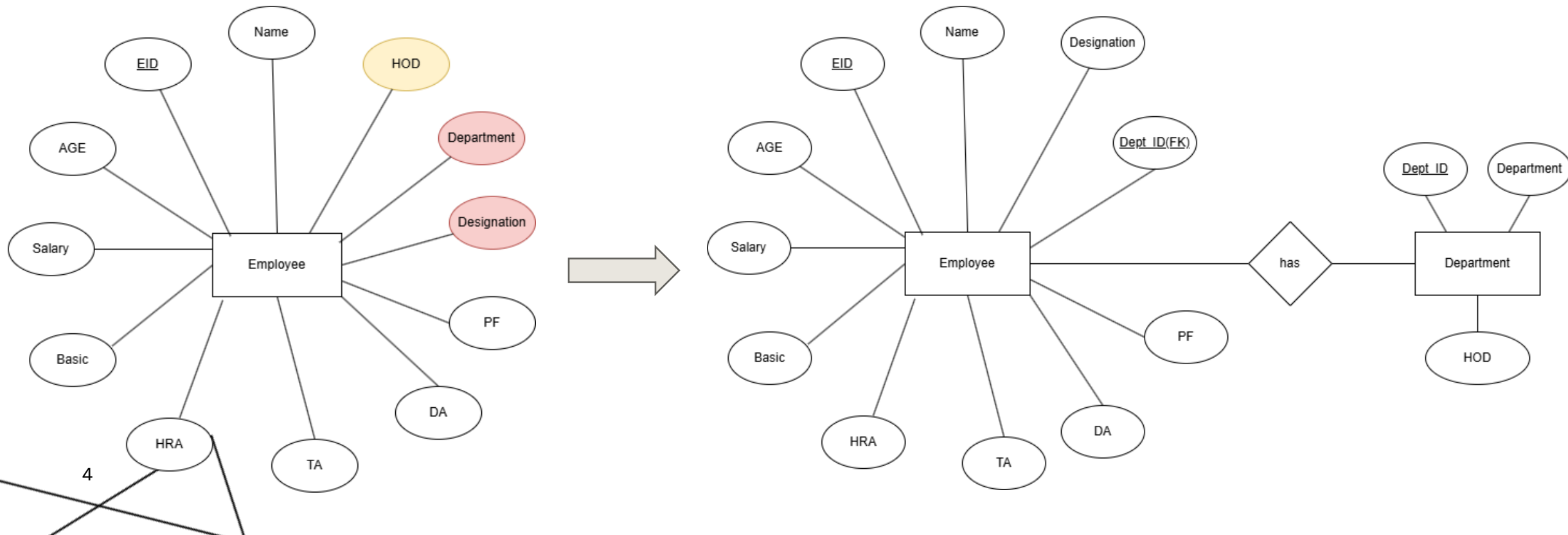
- Values within each cell should contain only a single value
- Each column should have a unique name.
- Helps to eliminate duplicate data and simplify queries.

EMPLOYEE (EID, NAME, AGE, SALARY, BASIC, HRA, TA, DA, PF, DESIGNATION, DEPARTMENT, HOD)

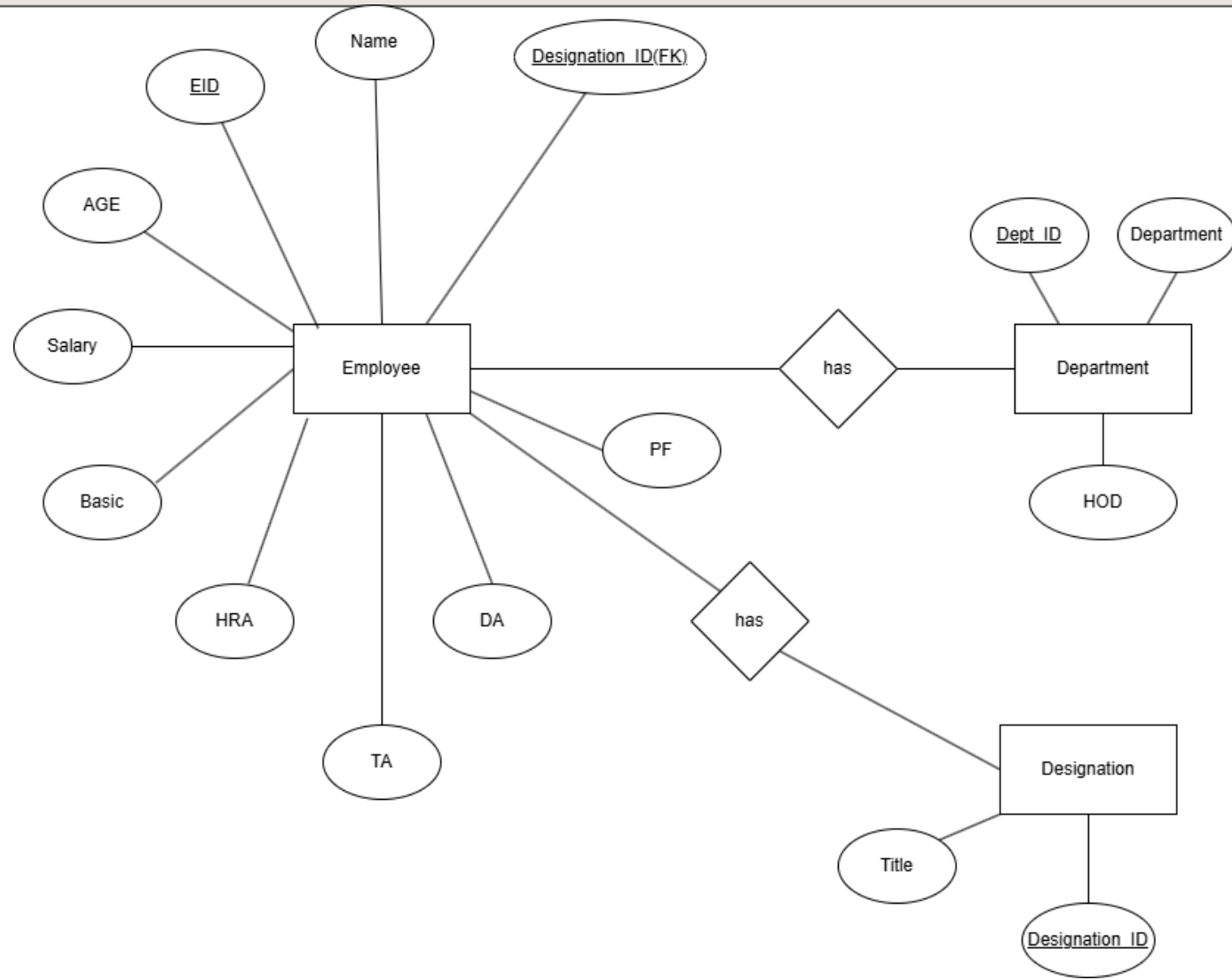


PERFORMING 2NF

- **Second Normal Form (2NF):** Each non-key attribute is dependent on the primary key.
- EMPLOYEE (EID, NAME, AGE, SALARY, BASIC, HRA, TA, DA, PF, DESIGNATION, DEPARTMENT, **HOD**)

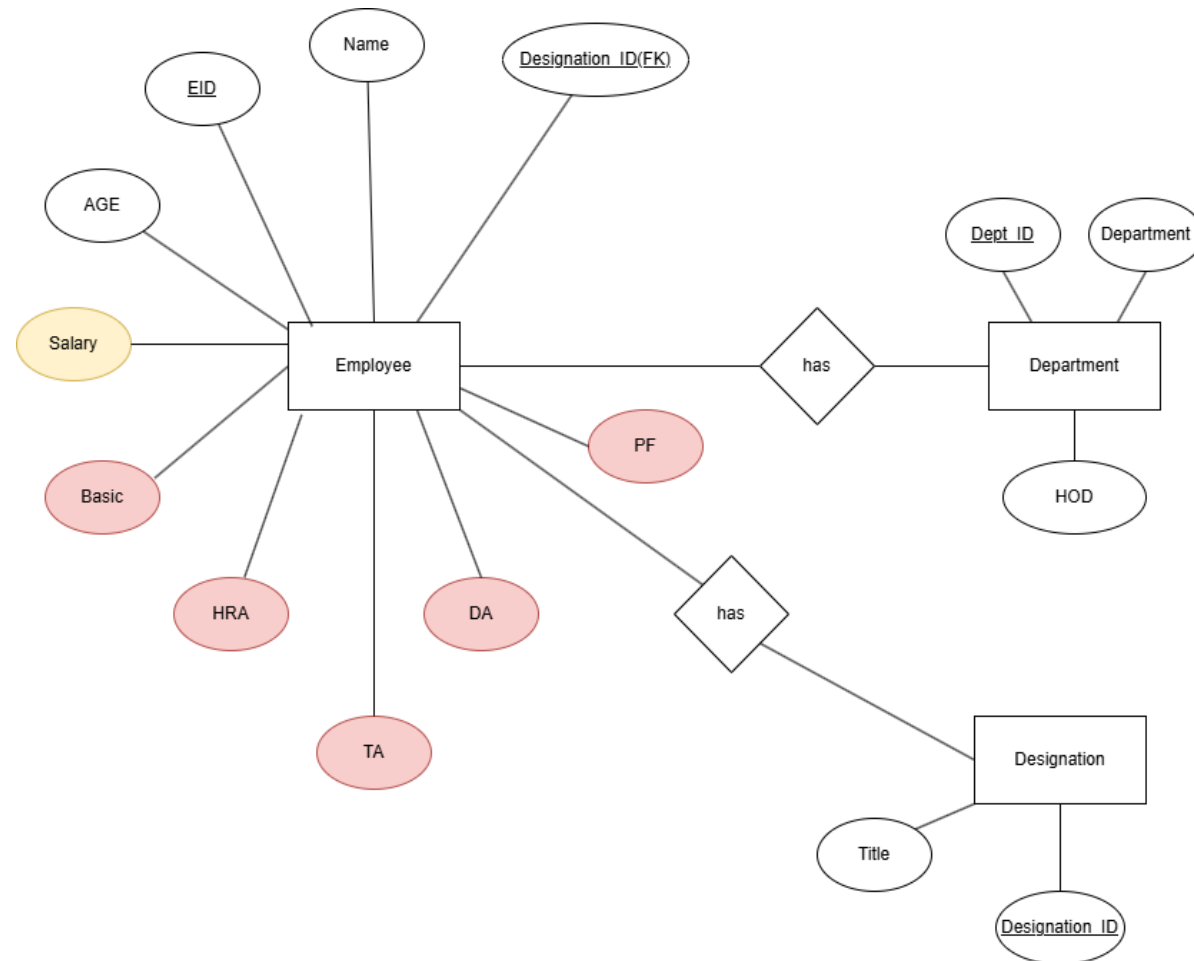


PERFORMING 2NF

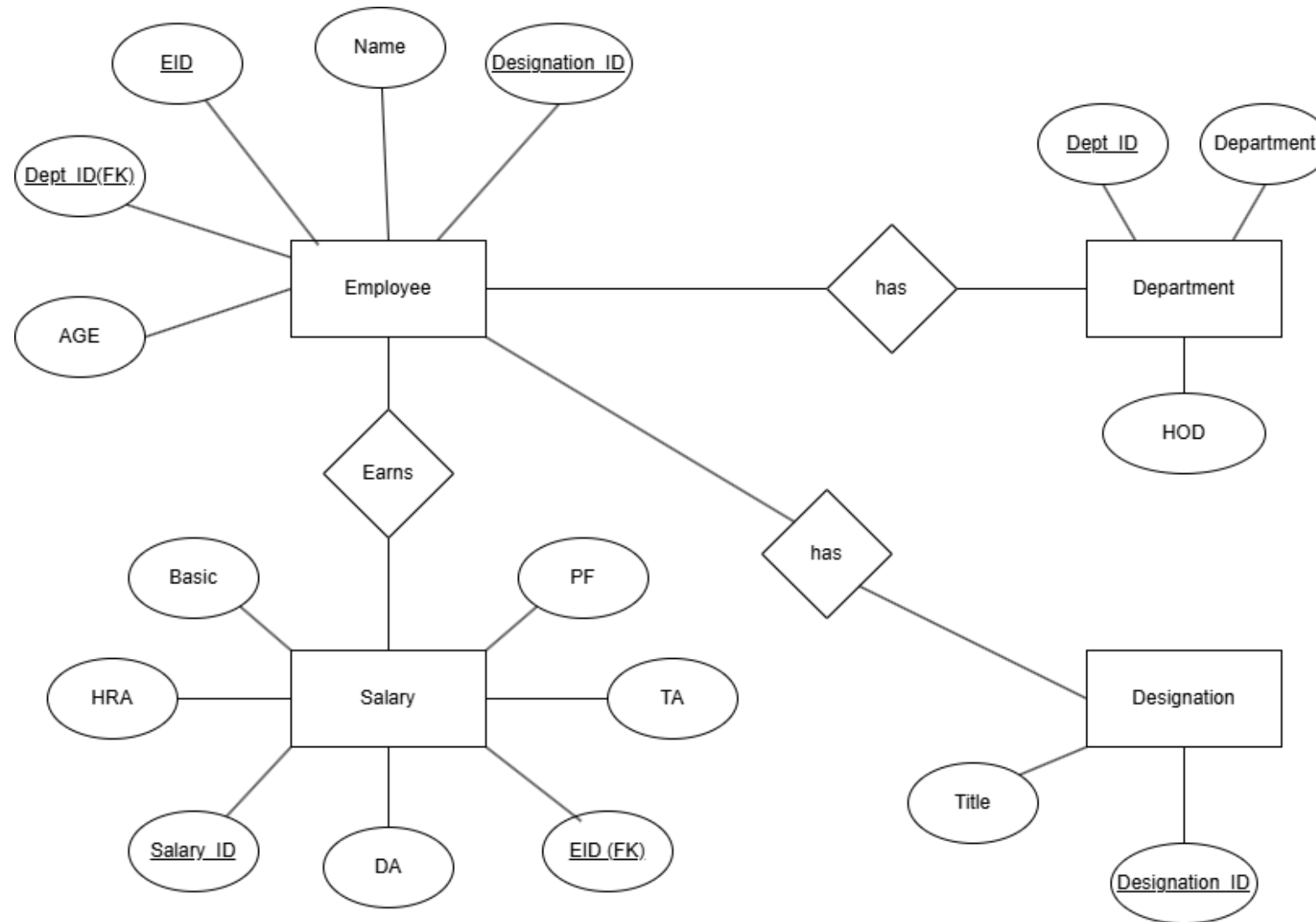


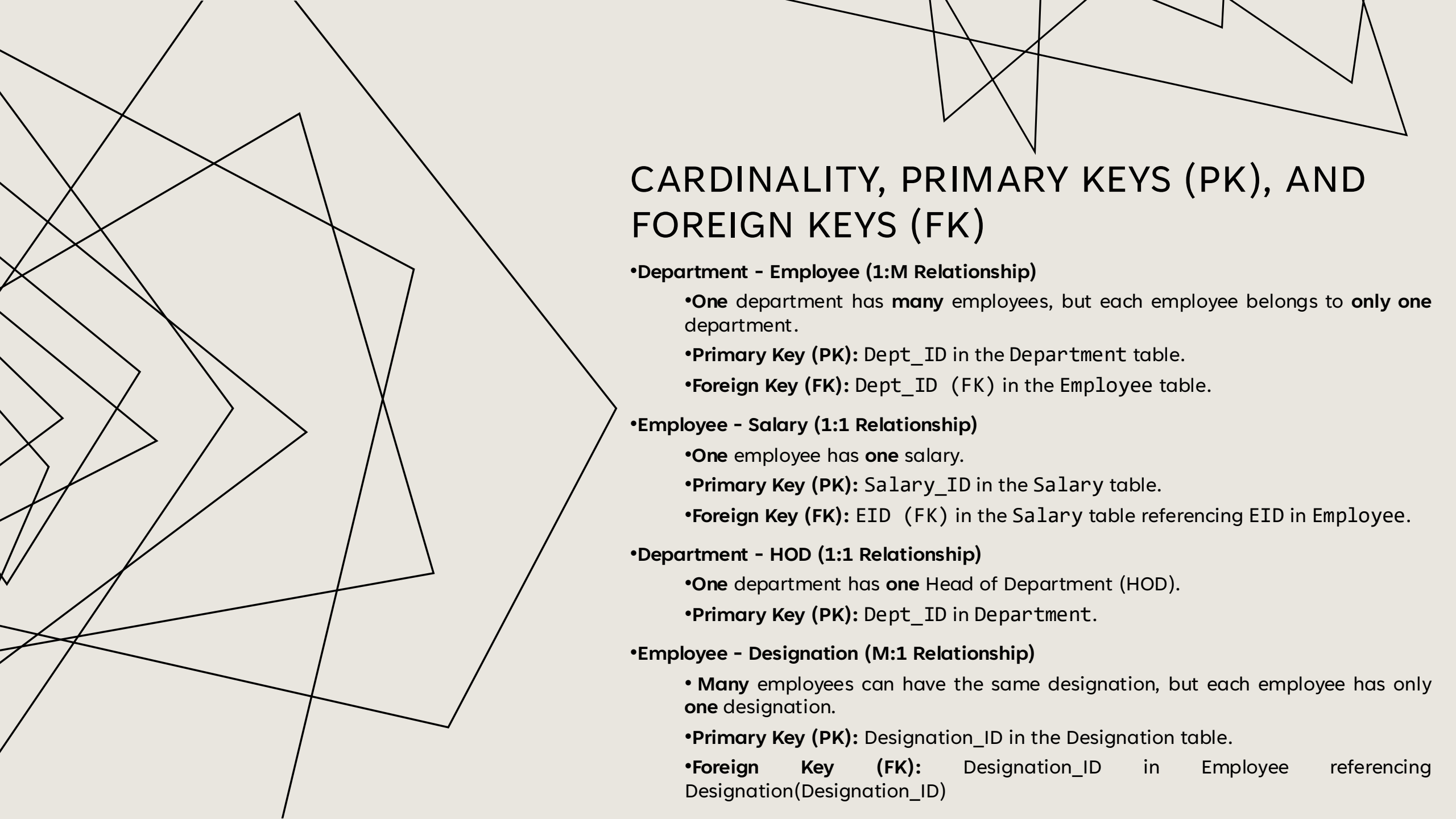
PERFORMING 3NF

- **Third Normal Form (3NF):** All non-key attributes are independent of each other. No transitive property present.
- EMPLOYEE (EID, NAME, AGE, **SALARY**, **BASIC**, **HRA**, **TA**, **DA**, **PF**, DESIGNATION, DEPARTMENT)



PERFORMING 3NF





CARDINALITY, PRIMARY KEYS (PK), AND FOREIGN KEYS (FK)

•Department - Employee (1:M Relationship)

- One** department has **many** employees, but each employee belongs to **only one** department.
- Primary Key (PK):** Dept_ID in the Department table.
- Foreign Key (FK):** Dept_ID (FK) in the Employee table.

•Employee - Salary (1:1 Relationship)

- One** employee has **one** salary.
- Primary Key (PK):** Salary_ID in the Salary table.
- Foreign Key (FK):** EID (FK) in the Salary table referencing EID in Employee.

•Department - HOD (1:1 Relationship)

- One** department has **one** Head of Department (HOD).
- Primary Key (PK):** Dept_ID in Department.

•Employee - Designation (M:1 Relationship)

- **Many** employees can have the same designation, but each employee has only **one** designation.
- Primary Key (PK):** Designation_ID in the Designation table.
- Foreign Key (FK):** Designation_ID in Employee referencing Designation(Designation_ID)



THANK YOU