

Relational Model Checkpoint

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Relational schema

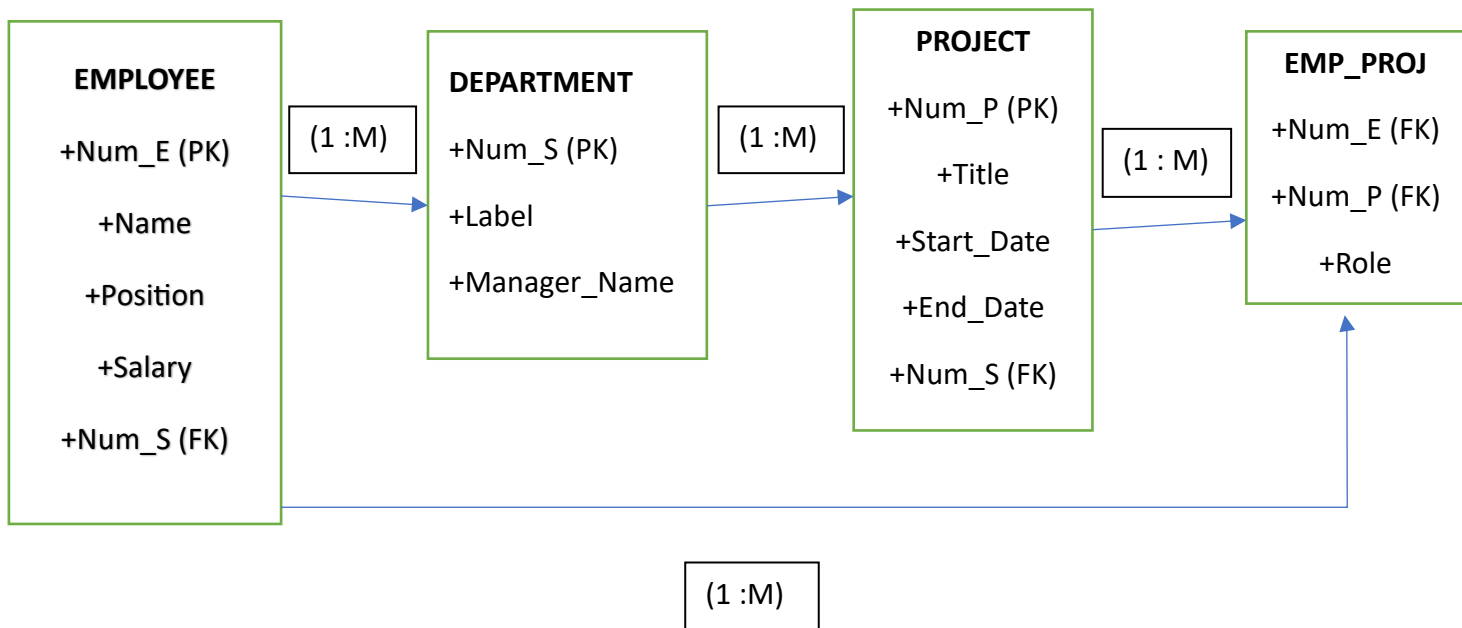
EMPLOYEE (Num_E, Name, Position, Salary, #Num_S)

DEPARTMENT (Num_S, Label, Manager_Name)

PROJECT (Num_P, Title, Start_Date, End_Date, #Num_S)

EMP_PROJ (#Num_E, #Num_P, Role)

ER diagram representation



Identify elements (entities, attributes, and relationships)

Entities and their attributes:

1. Employee (EMPLOYEE)
 - Employee Number (Num_E) → Primary Key
 - Name

- Position
 - Salary
 - Assigned Department (Num_S) → Foreign Key
2. Department (DEPARTMENT)
- Department Number (Num_S) → Primary Key
 - Label (Name)
 - Manager Name
3. Project (PROJECT)
- Project Number (Num_P) → Primary Key
 - Title
 - Start Date
 - End Date
 - Assigned Department (Num_S) → Foreign Key
4. Employee_Project (EMP_PROJ)
- Employee Number (Num_E) → Foreign Key
 - Project Number (Num_P) → Foreign Key
 - Role in Project

Relationships

1. Employee - Department (One-to-Many)
 - An employee belongs to only one department.
 - A department can have multiple employees.
2. Department - Project (One-to-Many)
 - A project belongs to only one department.
 - A department can have multiple projects.
3. Employee - Project (Many-to-Many, resolved with EMP_PROJ)
 - An employee can work on multiple projects.
 - A project can have multiple employees.
 - The role of the employee in a project must be tracked.