Conceptual Model Checkpoint

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Step 1: 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

Step 2: specify relationships

1. Employee - Department (One-to-Many)

   o An employee belongs to only one department.

   o A department can have multiple employees.

2. Department - Project (One-to-Many)

   o A project belongs to only one department.

   o A department can have multiple projects.

3. Employee - Project (Many-to-Many, resolved with EMP_PROJ)

   o An employee can work on multiple projects.

   o A project can have multiple employees.

   o The role of the employee in a project must be tracked.

Step 3: ER diagram representation