



Figure 3.2

An ER schema diagram for the COMPANY database. The diagrammatic notation is introduced gradually throughout this chapter.

1. Find out the entity type

Employee	Strong entity
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Department	Strong entity
Project	Strong entity
Dependent	Weak entity

2. Find out the relationships

Works_for	Strong and Binary relationship
Manages	Strong and Binary relationship
Works on	Strong and Binary relationship

Controls	Strong and Binary relationship
Dependents_of	Weak and binary relationship
Supervision	Strong Recursive relationship

3. Describe the ER Diagram in words

This ER diagram describes about a company environment with its features. It has 4 entities and 3 of them are strong and one is weak. Namely Employee, Department, Project are **strong entities** and Dependent is a **weak entity**.

Every entity has its attributes. Employee has these attributes (Name, Address, LName, Minit, FName, Bdate, Ssn, Salary, Sex). Similarly Department (Name, Locations, Number, Number of employees) Project (Name, Number, Location) and Dependent (Name, Sex, Birth_date, Relationship) have their attributes as above. However these attributes have different characters.

Ssn attribute which belongs to Employee entity is a **key attribute**. Name, Number which belongs to project and department also a **key attribute**. Locations under the department is a **multivalued attribute** and Number of Employees is a **derived attribute**. Except supervision others are **binary relationship**. Supervision comes under **recursive relationship**.

In binary relationship there are some varieties can be seen as follows.

Works_for **Many to one**

Manages	One to one
Works on	Many to many
Controls	One to many
Dependents_of	One to many
Supervision	One to many