

1. Find out the entity type

- **Strong Entity**
Employee-(Name,Salary,Sex,Address,Ssn,Bdate)
- **Strong Entity**
Department-(Name,Number,Location)
- **Strong Entity**
Project-(Name,Number,Location)
- **Weak Entity**
Dependent-(Name,Sex,Birth_date,Relationship)

2. Find out the relationships

1. Employee relates as works_for with Department many to one relationship.
2. Employee relates as manages with Department one to one relationship.
3. Employee relates as work_on with Project many to many relationship.
4. Project relates as controls with Department many to one relationship.
5. Employee weak relates as dependents_of with Dependent one to many relationship.

3. Describe the ER Diagram in words

Entity and Attribute Description

1. Employee:-Name,Bate,Salary,Sex,Address,Ssn
Primary key is Ssn
Here Location attribute is multivalued
2. Department:-Name,Number,Location
Primary key are Name and Number
Location is multi valued
3. Project:-Name,Number,Location
Primary key are Name and Number
Descriptive attribute is hours
Location is multi valued
4. Dependent-Name,Sex,Birth_date,Relationship
Primary key is Name
Here Dependent entity is weak entity

Relationship Description

1. Employee relates as works_for with Department many to one relationship.
2. Employee relates as manages with Department one to one relationship.
3. Employee relates as work_on with Project many to many relationship.
4. Project relates as controls with Department many to one relationship.
5. Employee weak relates as dependents_of with Dependent one to many relationship.

Data flow Description

1. Employee relates with department Both of relationships are full participation
2. Employee relates with Project Both of relationships are full participation
3. Project relates with Department Both of relationships are partial participation
4. Employee weak relates with Dependent Both of relationships are partial participation

