



1. Find out the entity type

Employee(Ssn,Name,Address,Salary,Sex,Bdate)

Department(Name,Number,Locations)

Project(Name,Number,Location)

Dependent(Name,Sex,Birth_date,Relationship)

2. Find out the relationships

-Employee WORKS_FOR Department

N : 1

-Employee MANAGES Department

1 : 1

-Department CONTROLS Project

1 : M

-Employee WORKS_ON Project

M : N

3. Describe the ER Diagram in words

There are four entities in this ER Diagram. Employee entity has

(Ssn, Name, Bdate, Address, Salary, Sex). Ssn is a primary key. The name has three composite attributes that are Fname, Minit, Lname. All Employees depends on Department and Department depends on all employees. So it is total participation. Many Employees Works on a Department. A Department has many employees. So this is one to many relationship

An employee Manages a Department. A Department manages by an Employee. So this is one to one relationship. The Start_date attribute is a descriptive attribute. Employee to the department is partial participation. department to an employee is total participation.

A Department has four attributes. That

are (Name, Number, Locations, Number_of_Employees). Name and Number are unique keys or primary keys. Location is a multi-value attribute. Number_of_Employees is a derived attribute.

A Project has many Employees. All Employees work on all Projects. So this is many to many relationship.

A Department controls many Project. A Project controls by a Department. So this is one to many relationship

Dependent is a weak entity that has four attributes that are Name, Sex, Birth_Date, Relationship