

# ER Diagram Exercise1

## 1. Find out the entity type

- employee
- department
- project
- dependent

## 2. Find out the relationships

- Many to one (Employee to department)
- one to one (Employee to Employee)
- one to many (Department to project) (Employee to department) (Employee to Employee)
- many to many (Employee to project)
- Work for (Binary relationship)
- Manages (Binary relationship)
- Works on (Binary relationship)
- Controls (Binary relationship)
- Dependent of (Weak Relationship)

## 3. Describe the ER Diagram in words

### 1. Many Employees work in One Department

#### 1. Employee has

1. ssn – primary key
2. name – composite attributes
  1. fname – simple attribute
  2. minit – simple attribute
  3. lname – simple attribute

#### 3. Bdate

#### 4. Address

#### 5. Salary

#### 6. Sex

#### 2. Employee Entity has a recursive relationship

1. One Employee supervises Many Employee

#### 3. Department has

1. Name – Primary Key
2. Locations – Multivalued Key
3. Number – Candidate key
4. Number\_of\_employee – Derived Key (depends on the employees)

### 2. One Employee manages One Department

1. Start Date – Relationship attribute
3. Many Employees work on Many Projects
  1. Hours – Relationship attribute
  2. Project Entity has
    1. Name – Candidate key
    2. Number – Primary key
3. Location
4. Many Dependents Dependent on One Employee
  1. Dependent is a weak entity and has a weak relationship with Employee
    1. Name – Primary key
    2. Sex
    3. Birth date
    4. Relationship
5. One Department Control Many Projects