



Description of ER Model

- An employee can work in many departments; a departments can have many employees. In contrast, each department has at most one manager, according to the key constraint on Manages. (Hence a thick line with arrow pointing **Manages** (Relationship)).
- There is a participation constraint: the participation of Departments in Manages is total. Every Departments entity must appear in an instance of the Manages relationship.

- The thick lines between **Work_In** (Relation) and **Employee**(Entity) ,**Department**(Entity) indicates that every location participates in this relationship i.e there is no location such that there is no employee in that particular location. (Can understand it like **total participation**). Every employee and every department participates in Works_In relationship.
- Employees are “**SPECIALIZED**” into subclasses. Full time employees, interns and Hourly employees are “**GENERALIZED**” by Employees.(“**ISA**” Hierarchy).
- Departments are also “**SPECIALIZED**” into subclasses. Non-HR Department and HR Department are “**GENERALIZED**” by Department.(“**ISA**” Hierarchy).
- Description of keys in our ER-Model:-
 - **Contact** attribute in a Department(Entity) is a multi valued attribute.
 - **Dept_id** attribute in a Department is a primary key.
 - **Cand_id** attribute in candidate (entity) is a primary key.
 - **C_Name** attribute in Company is primary key.
 - ***Address** attribute is a composite attribute in any Entity (Because it has Pin Code, Landmark, City, Street Name etc).
 - **D_Name** in Non Hr Department is multi valued attribute.
- Description of relationships in our ER-Model:-
 - Company monitors Department.
 - Candidate applies_to Company.
 - Department interviews Candidate.(through HR-Department){This is External recruitment}
 - Department interviews Employees.(through HR-Department){This is Internal recruitment because there can be vacancies in higher positions within a company where employees are promoted}
 - Employees works_in a particular department and a particular location(Entity).
 - Department manages its employees.

