KEYS
In E-R-Model

No two entities in an entity set are allowed to have exactly the same value for all Attribute.

So, a Key allows us to identify a set of attributes that suffice to distinguish entities from each other.

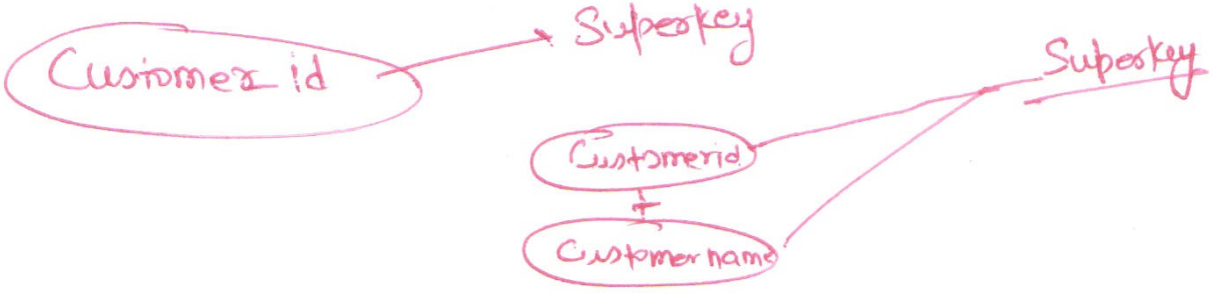
Eg Data in Entity attributes Customer_id of entity Customer should be unique and should be not be same for other entity set of same attribute Customer_id.

Keys in Entity Sets :- There are many keys through which we can uniquely identify an entity and Row.

Superkey → A Superkey is a set of one or more attributes that taken collectively, allow us to identify uniquely an entity in the entity set.

Ex:-
Customer_id attribute of the entity set Customer is sufficient to distinguish one Customer entity from another. Thus Customer_id is our Superkey.

Combination of Customer_name & Customer_id is Super key for the Entity set Customer. But Customer_Name attribute is not Superkey as persons has same name



2) Candidate key :- Minimal Super keys are called Candidate

If we consider K is Super key then Candidate key will be any Super set of K.

3) Primary key :- is a Candidate key attribute/Column that is most suited to maintain uniqueness in a table at the Row/Level.

Ex:- Lets take Entity Employee with Attributes

① Employee ID, ② Employee Name ③ DOB (Date of birth)
④ DOJ (Date of joining), ⑤ SSN (Social Security No.),
⑥ Dep ID (Department ID) ⑦ MgrID (Manages ID)

→ In this Employee entity, attribute Employee ID & SSN individually can maintain uniqueness in a table. So they are eligible for Candidate key. Attributes Employee_Name & DOB Combined can also make up a candidate key. but there is narrow chance that 2 Employees with same name can be born in same day.

→ In this Employee ID & SSN (Not combindally) only be used here as primary key because every value in this attributes are unique.

→ In this Employee ID + Employee Name is a Superkey because Superkey is a Superset of Candidate key. If we add any attribute in Candidate Key then it becomes a Super key. As Employee Name can be name of Other employee so Combining them gives unique value..