1.Distinctions between :

Super Key:

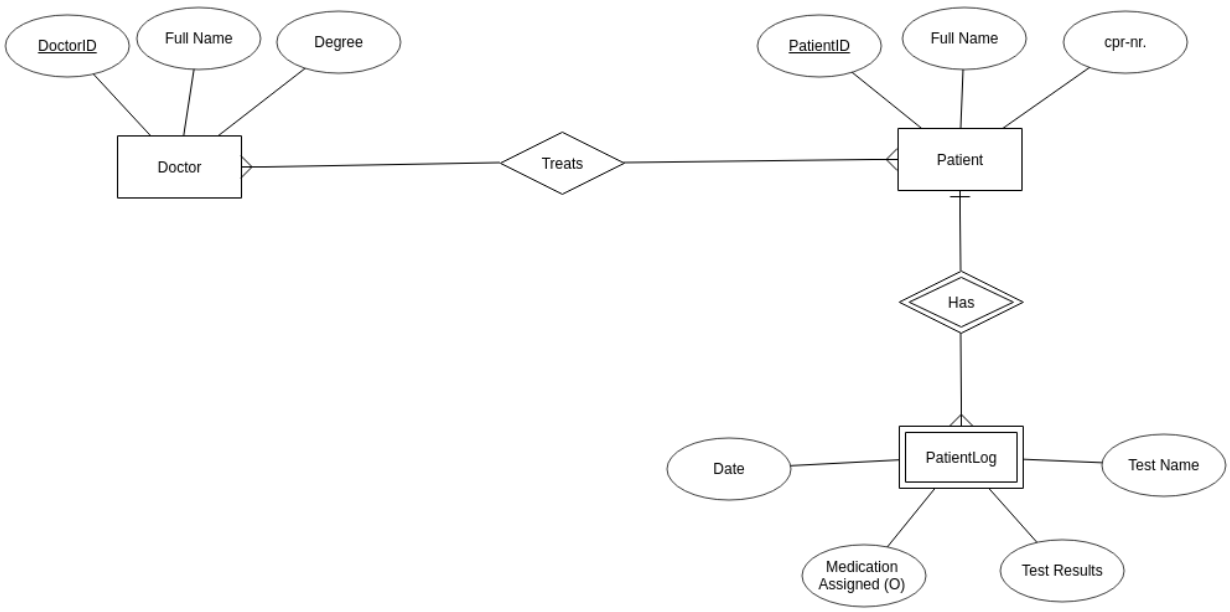
An attribute or set of attributes that uniquely identifies a tuple within a relation. A table might have many superkeys.

Candidate key:

A relation can have only one primary key. It may contain many fields or combination of fields that can be used as primary key. One field or combination of fields is used as primary key. The fields or combination of fields that are not used as primary key are known as candidate key or alternate key.

Primary key: The candidate key that is selected to identify tuples uniquely within the relation.

2.



3.

Customer(CustomerID, FullName, Address)
Car(LicenseNr, Model, **CustomerID**)
Accident(ReportID, Date, Place, **LicenseNr**)
Policy(PolicyID, **LicenseNr**)
PremiumPayment(PaymentNr, DueDate, Amount, ReceivedOn, **PolicyID**)

Student(StudentID, Name, DepartmentName, TotalCredits)
Exam(ExamID, Name, Place, Time)
Section(SectionID, Semester, Year, **CourseID**)
Marks(Mark, **StudentID**, **ExamID**, **SectionID**)
Course(CourseID, Title, Credits)

Student(StudentID, Name, DepartmentName, TotalCredits)
Section(SectionID, Semester, Year, **CourseID**)
Exam(**StudentID**, **SectionID**, { Exams(ExamID, ExamMark) })
Course(CourseID, Title, Credits)

Match(MatchID, Date, Stadium, Opponent, OppScore)
Player(PlayerID, Name, Age)
Score(Score, **MatchID**, **PlayerID**)

4.Difference between strong and weak entity set.
Strong entity – It has a primary key and its independent to any other entity in the schema. Denoted by a **rectangle**, It may or may not have total participation in the relationship.
Set of similar types of strong entities together forms the **Strong Entity Set**. A strong entity holds the relationship with the weak entity via an *Identifying Relationship*, which is denoted by **double diamond** in the ER diagram. On the other hands, the relationship between two strong entities is denoted by a **single diamond** and it is simply called as a relationship.
Weak entity(**double rectangle**) – It has a partial discriminator key and it depends on the strong key for its existence.It has a total participation in the relationship.The primary key of a weak entity is a composite key formed from the primary key of the strong entity and partial key of the weak entity.

5.
books(isbn, title, publisher, author)
accession(accessionno, isbn)
users(userid, name, deptid)
departments(deptid, deptname)

6.
Using the functional dependencies of Practice Exercise 8.6, compute B+. Hint: Algorithm fig 8.8 Closure: the set of all functional dependencies logically implied by B. B+ is the closure of B. r(A,B,C,D,E). A→BC CD→E B→D E→A The only attribute that depends on B is B itself and D. Therefore B+ ={B,D}