ER MODEL IN DBMS

Types of relationship in dbms (Based on degree)

There are 4 types of relationship:

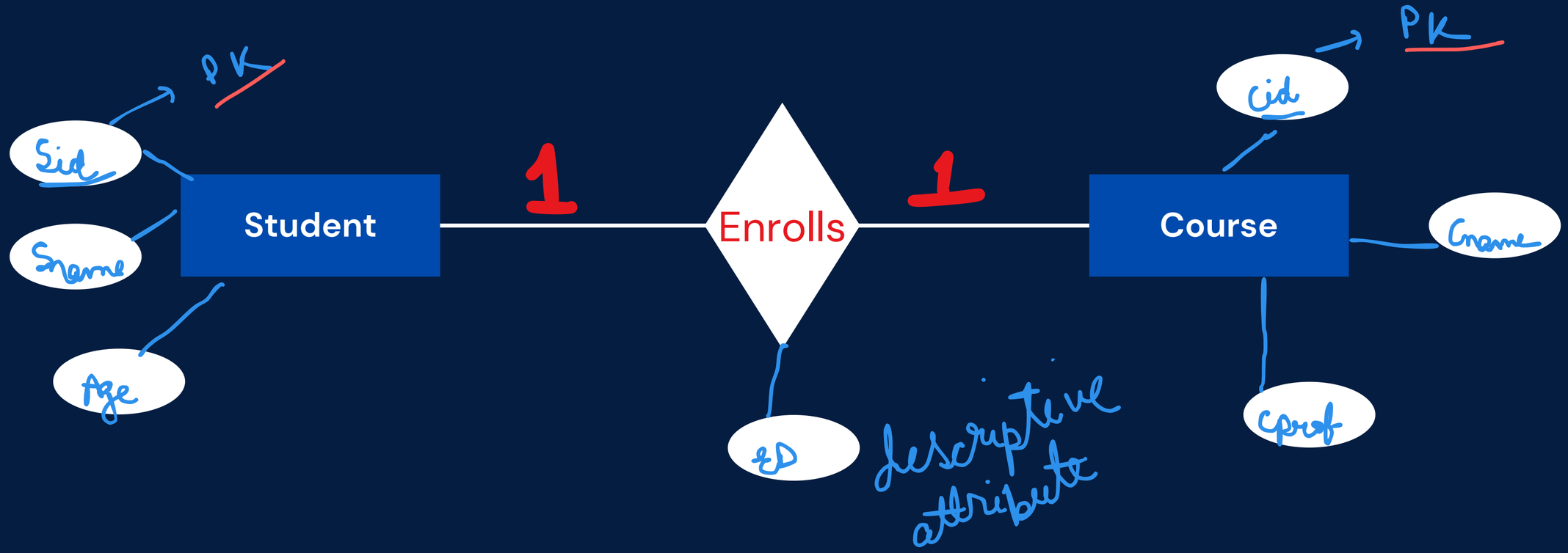
- one to one (1-1)
- one to many (1-N)
- many to one (N-1)
- many to many (N-N)

ER MODEL IN DBMS

- ## Types of Relationship(Cardinality)

1 to 1 Relationship(1:1)

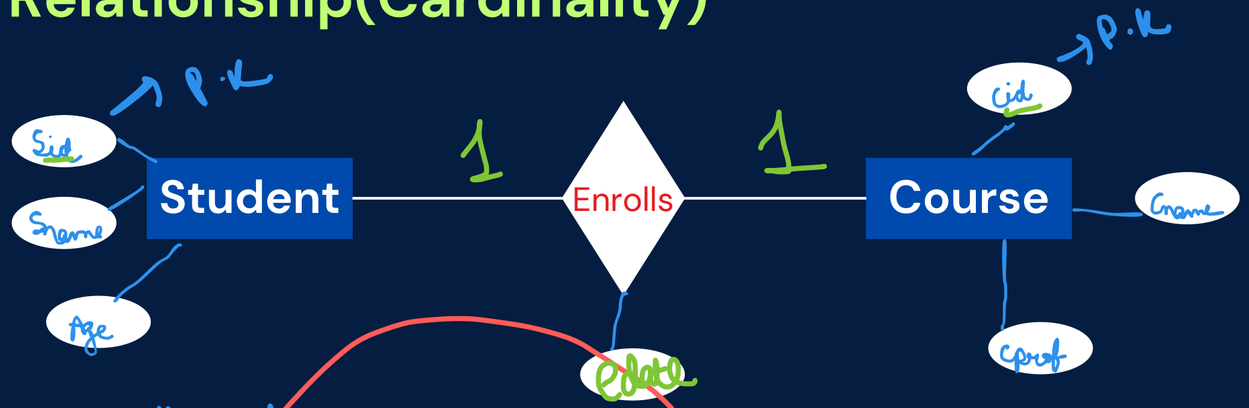
Each row in one table is associated with one and only one row in the other table, and vice versa.



ER MODEL IN DBMS

- Types of Relationship(Cardinality)

1 to 1 Relationship(1:1)

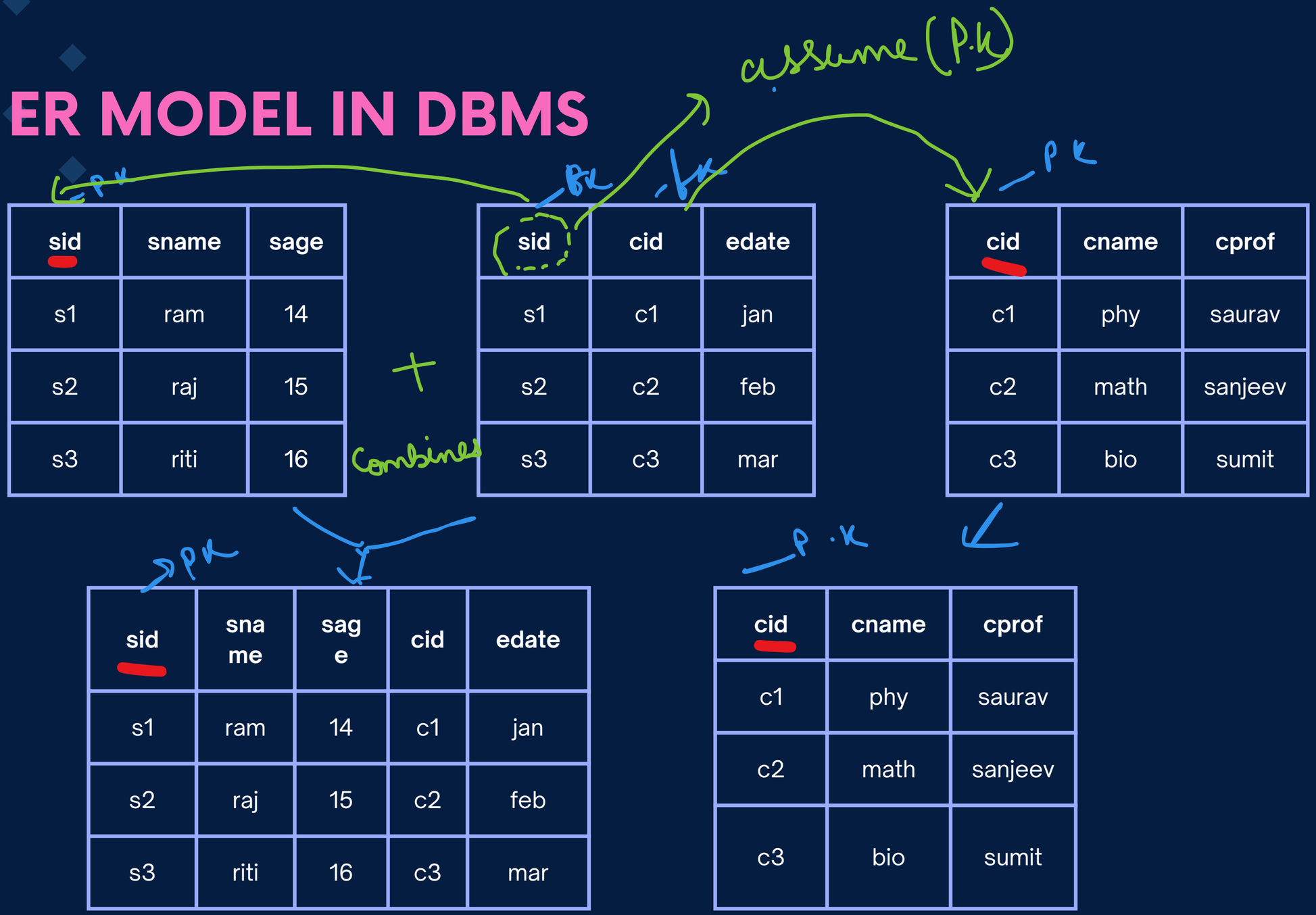


sid	sname	sage
s1	ram	14
s2	raj	15
s3	riti	16

sid	cid	edate
s1	c1	jan
s2	c2	feb
s3	c3	mar

cid	cname	cprof
c1	phy	saurav
c2	math	sanjeev
c3	bio	sumit

ER MODEL IN DBMS



sid	sname	sage
s1	ram	14
s2	raj	15
s3	riti	16

sid	cid	edate
s1	c1	jan
s2	c2	feb
s3	c3	mar

cid	cname	cprof
c1	phy	saurav
c2	math	sanjeev
c3	bio	sumit

sid	sname	sage	cid	edate
s1	ram	14	c1	jan
s2	raj	15	c2	feb
s3	riti	16	c3	mar

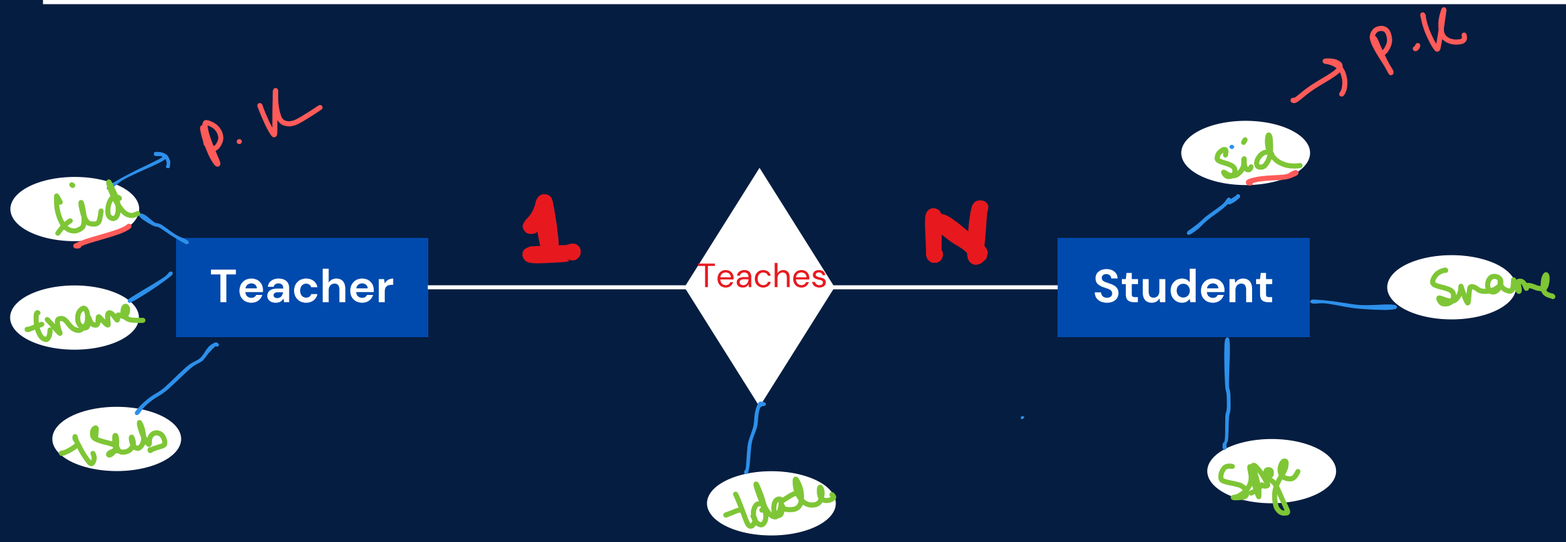
cid	cname	cprof
c1	phy	saurav
c2	math	sanjeev
c3	bio	sumit

ER MODEL IN DBMS

- Types of Relationship

1 to Many Relationship(1:N)

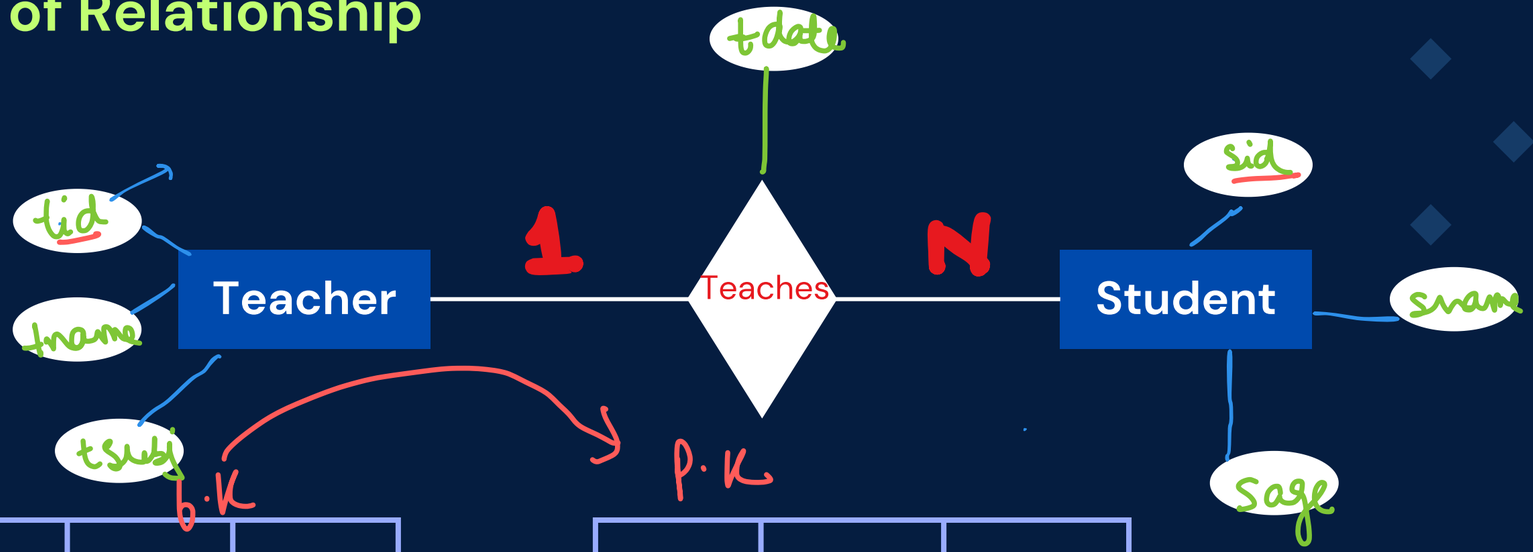
A single record in one table may have connections to multiple records in another table, while each record in the second table is linked to only one record in the first table.



ER MODEL IN DBMS

- Types of Relationship

1 to Many Relationship(1:N)



P.K FK P.K FK P.K

sid	sname	sage
s1	ram	14
s2	raj	15
s3	riti	16

teacher

sid	tid	tdate
s1	c1	jan
s2	c2	feb
s3	c3	mar

teaches

tid	tsubj	tname
c1	phy	saurav
c2	math	sanjeev
c3	bio	sumit

Subj

ER MODEL IN DBMS

sid	sname	sage
s1	ram	14
s2	raj	15
s3	riti	16

sid	tid	tdate
s1	c1	jan
s2	c2	feb
s2	c3	mar

tid	tname	tsub
c1	phy	saurav
c2	math	sanjeev
c3	bio	sumit

combines

sid	sname	sage
s1	ram	14
s2	raj	15
s3	riti	16

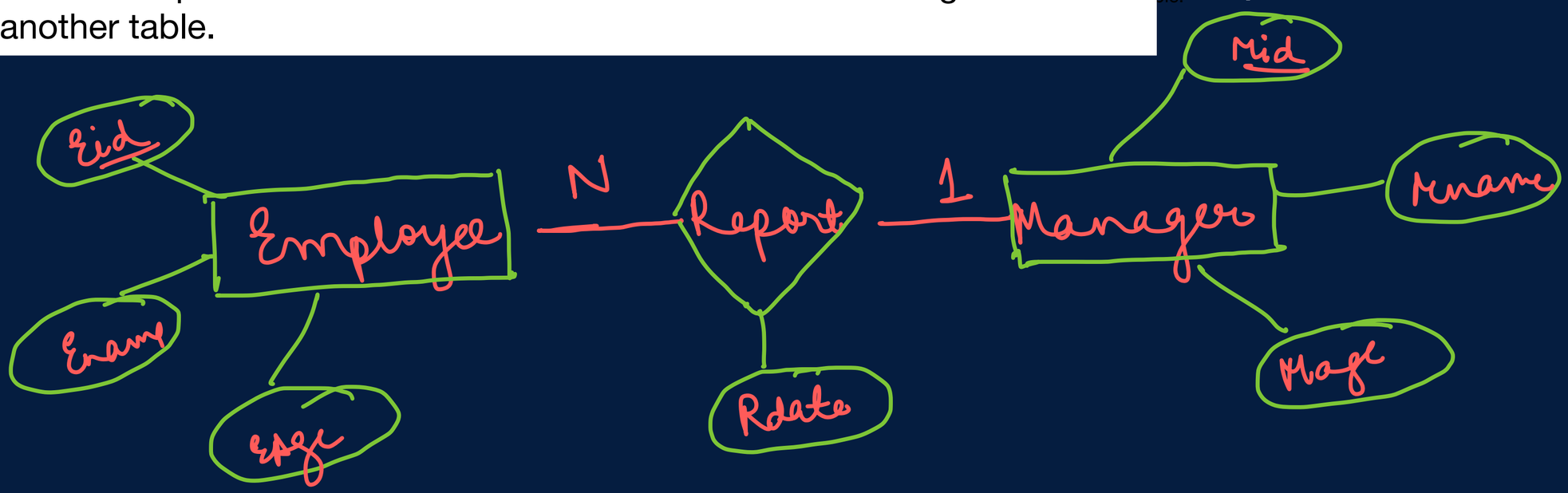
tid	tsub	tname	sid
c1	phy	saurav	s1
c2	math	sanjeev	s2
c3	bio	sumit	s3

ER MODEL IN DBMS

- Types of Relationship

Many to 1 Relationship(N:1)

When multiple records in one table are associated with a single record in another table.



ER MODEL IN DBMS

- Types of Relationship

Many to 1 Relationship(N:1)

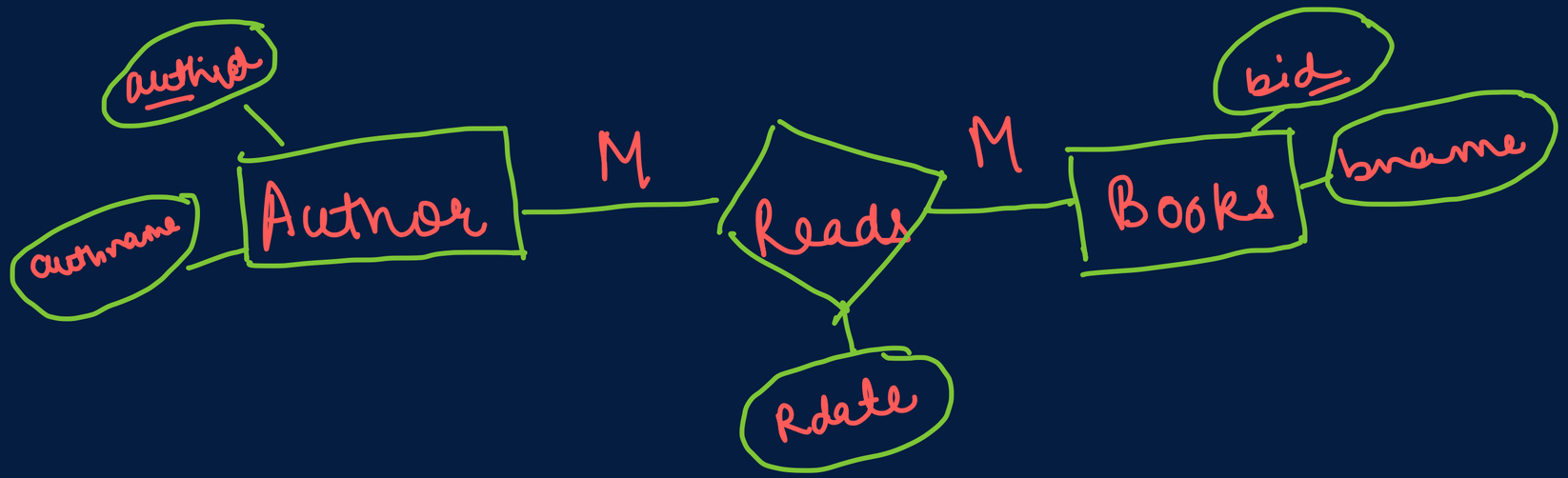
1. Primary Key → the one at the many side (End)
2. Reduction → Combine the many + Relationship table.
   (Emp + Report)

ER MODEL IN DBMS

- Types of Relationship

Many to many Relationship(N:N)

When multiple records in one table can be associated with multiple records in another table



ER MODEL IN DBMS

- **Types of Relationship**

Many to many Relationship(N:N)

In this relationship multiple elements from one set are related to multiple elements in another set.