

table/relation

each row should be unique

student

f_name	L_name	Roll no	d_id	email	m_no
Akhilesh	yadav	15	2	abc@gmail	
Apoorva	kr	30	5	a1@gmail.com	
mayer	yelmale	15	1	a2@gmail.com	
Akhilesh	yadav				

keys:- keys are combination of attributes that uniquely identify each tuple/row/record.

$$\text{total combination} = 2^n - 1$$

Super keys: keys are combination of attributes that uniquely identify each tuple/row/record. it may contains some extra attributes than necessary.

	super keys	candidate key
{ f-name }	X	X
{ f-name, l-name }	X	X
{ f-name, l-name, <u>email</u> }	✓	X
{ f-name, email }	✓	X
{ l-name, roll.no }	X	X
{ <u>email</u> }	✓	✓
{ l-name, roll.no, d-id }	✓	X
{ <u>roll.no</u> , <u>d-id</u> }	✓	✓
{ m-no }	✓	✓

candidate keys : A candidate key is minimal of super key.

{ f-name , l-name, email }	✓	X
{ l-name , email }	✓	X
{ email }	✓	✓

Primary key :

it should be unique.

A primary key is selected from candidate key.

by dB designer

it cannot be null.

m-no → as → primary key X

s-id → primary key

Primary key

S-id	f-name	L-name	Roll no	d-id	email	m-no
1	Akhillesh	yadav	15	2	abc@gmail	345624
2	Apoorva	kr	30	5	a1@gmail.com	987954 872045
3	mayur	yelmale	15	1	a2@gmail.com	389945
4	Akhillesh	yadav				976623

course

C-id	C-name	S-mno
1	abc	987934
2	xy2	345624

* composite key : A composite is combination of

two or more attributes

composite key

{ roll-no, d-id }

✓

{ f-name, roll-no, d-id }

X

* foreign key: A foreign key is an attribute that establishes a relation. it reference the primary key of another table.

(PK) Student

foreign-key

S-id	f-name	L-name	Roll no	d-id	email
1	Akhilish	yadav	15	2	abc@gmail
2	Apoorva	kr	30	5	a1@gmail
3	mayur	yelmale	15	1	a2@gmail
4	Akhilish	yadav			

department primary key

d-id	d-name	d-hod
1	abc	Aryan
2	xyz	Sehraway

break till 9:25

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Server Tools Scripting Help
Query 1 x
Limit to 1000 rows
1 • create database mydb1;
2 • create database if not exists mydb1;
3 • drop database mydb1;
4 • drop database if exists mydb1;
5
6 • use mydb1;
7
8 • create table students(
9     st_id int primary key ,
10    f_name varchar(20) ,
11    l_name varchar(20)
12 );
13
14 • insert into students values( 12 , 'lokes' , "kumar" , 1);
15 • insert into students values( 8 , 'subransu' , "sekhar");
16
Query 1 x
Limit to 1000 rows
17 • select * from students;
18
19 • create table Departments(
20     d_id int primary key ,
21     d_name varchar(20) ,
22     Hod varchar(20)
23 );
24
25 • insert into Departments values( 3 , 'd1' , "aman");
26
27 • alter table students
28     add d_id int;
29
30 • alter table students
31     add constraint fk_dept_id foreign key (d_id)
32     references Departments (d_id);
33
34
```