CRUD -I

Hey everyone!

We start at 7:05 AM.

Agenda.

→ Primary keys
→ Foreign keys   → Composite keys

SQL
→ Intro
→ Create tables
→ Add foreign keys

→ select
→ where
→ conditions
AND, OR & NOT
→ IN
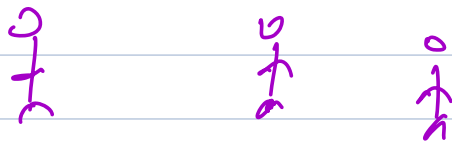
→ CRUD - 2
↳ Next class.

Primary keys.

Students

name	email	phone_no	password

CK $\rightarrow$ (email & ph_no) =

(email) —

(phone_no) —

MySQL / any relational database,
keys play a very imp role
$\Downarrow$

Data is store in tables ordered by
their keys.

height & wt.

Primary keys $\rightarrow$ one of the candidate keys that
is given a special role of being the key by
which the data will be sorted on the disk.

Good practices

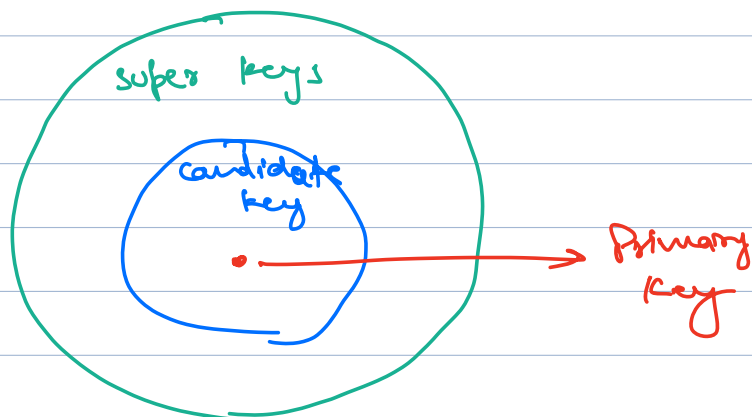① Ideally the value of a PK should not change.

② There are some data types that are easier to compare.

Int $O(1)$ String $O(n)$

$$\left.\begin{array}{l} \text{aabcd} \\ \text{aacda} \end{array}\right\} O(n)$$

→ ideally a PK should be **integer**

Students

id   name   class   phone   parent_name

roll_no

super keys

candidate key

Primary key

Introduction to SQL

S → { Structured }
Q → { Query }
L → Language

⇒ allows you to write (structured) queries
to organised

MySQL,

Relational dB allow you to store data in an organised way
↓

SQL →

queries.
*
Create, Delete, update etc.

Break till 8:20 Am

Foreign keys.

students.

id	name	email	psp	is-active	batch-id
1	ujjwal	abc@--	100	1	3
2	xyz	xyz@---	25	0	4
3	ijk	ijk@--.	100	1	7

batch

batch-id	batch-name
3.	Aug, 1
4.	April, 5

PK

foreign key.

Foreign key → allow you to have constraint that allow a coln of one table to be linked to a coln of another table.

* Foreign key does not have to be related to PK of the other table / referred table

→ The only thing FK allows is to map a coln or a set of coln from one table to a set of coln of the other table.

students.

id	name	email	year-of-birth
1	ujjwal	abc@_	2020
2	amar		

FK

null

Years.

id	year	is_leap	covid-year
1	2005	0	0
2	2020	1	1
3	2020 null	0	0
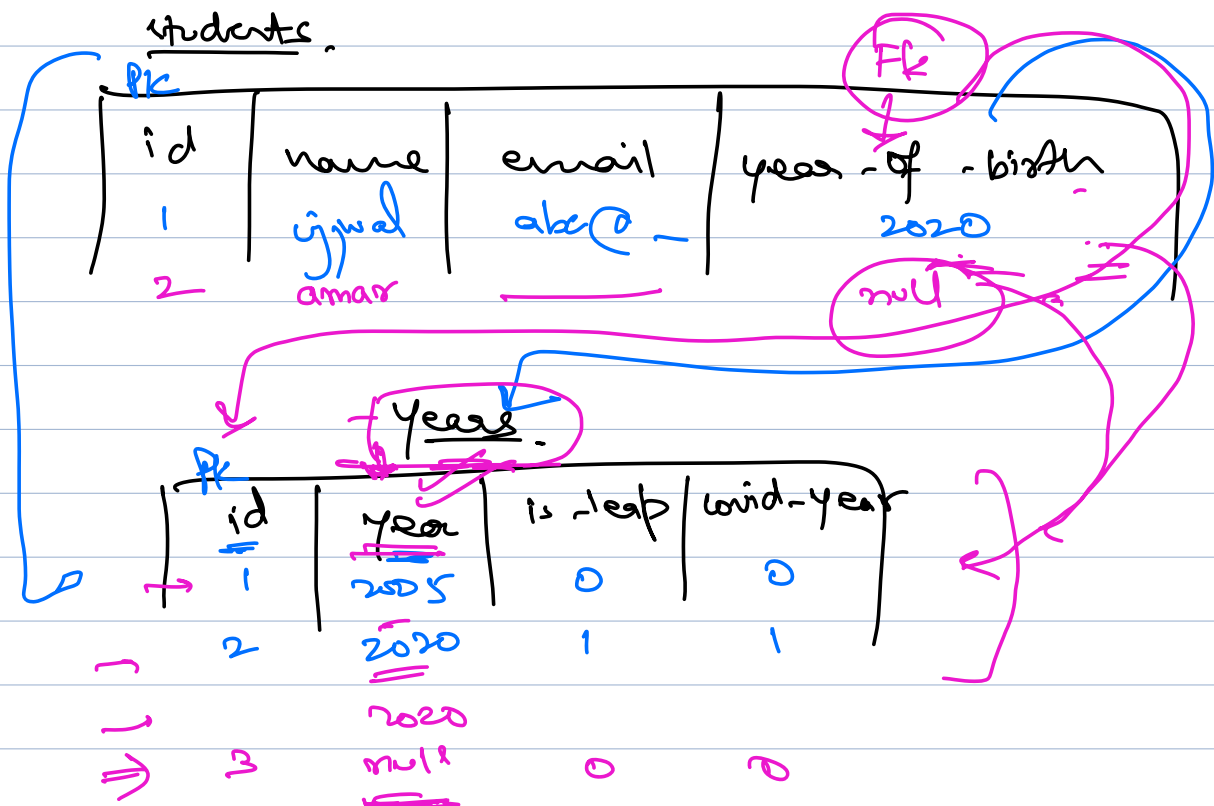
① coln of the referred table must be unique.

② both the sides can be nullable

students

id   name   batch.id ..

        null

batch
id name

Possible issues.

① someone deletes a referred record
② someone updates a referred record.
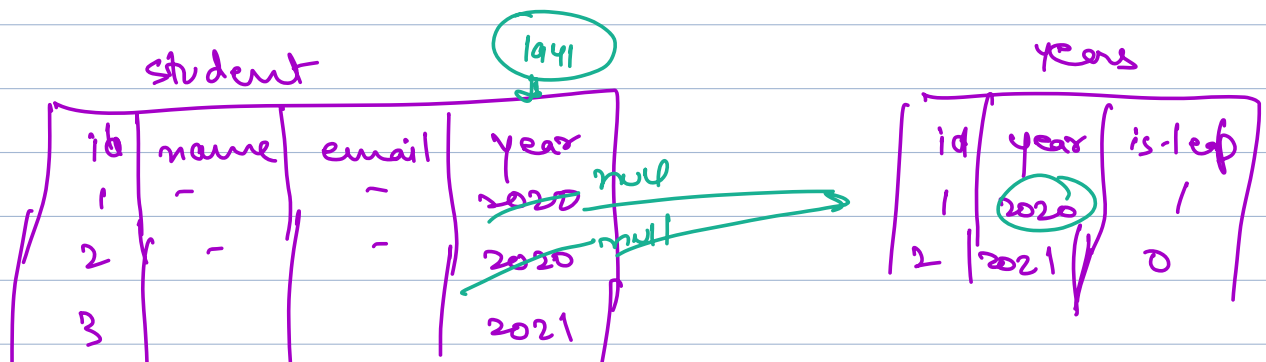
Solve

① Throw an error
② Delete all dependents   } constraint.
③ set the value to null

ON DELETE	ON UPDATE
→ CASCADE	→ CASCADE
→ NO ACTION	→ NO ACTION
→ SET NULL	→ SET NULL
→ SET DEFAULT	→ SET DEFAULT
(you will need to have a default value)	

student   (1941)   years

id	name	email	year		id	year	is-leap
1	-	-	2020 → null		1	2020	1
2	-	-	2020 → null		2	2021	0
3			2021				

| y | 2021 |