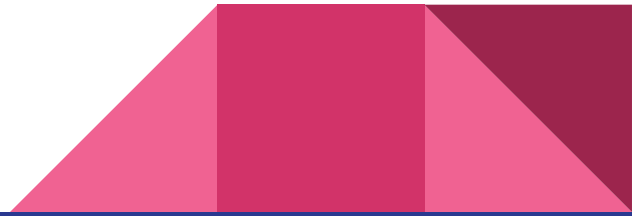
Business Databases

Lecture 2 - Introduction to SQL data definitions

Agenda

- CREATE TABLE
- MS SQL Data Types
- ALTER TABLE
- DROP TABLE
- SELECT
- INSERT
- UPDATE
- Constraints
- DELETE



CREATE TABLE

W3schools create table

SQL server data types

INSERT, UPDATE, DELETE

INSERT

UPDATE

DELETE

ALTER TABLE

ALTER TABLE - ADD Column

ALTER TABLE - DROP COLUMN

ALTER TABLE - ALTER COLUMN

Changing column type

DROP TABLE

Integrity Constraints

Domain constraints

- Domain constraints can be defined as the definition of a valid set of values for an attribute.
- The data type of domain includes string, character, integer, time, date, currency, etc. The value of the attribute must be available in the corresponding domain.

ID	NAME	SEMENSTER	AGE
1000	Tom	1st	17
1001	Johnson	2nd	24
1002	Leonardo	5th	21
1003	Kate	3rd	19
1004	Morgan	8th	A

Not allowed. Because AGE is an integer attribute

Integrity Constraints

Entity integrity constraints

- The entity integrity constraint states that primary key value can't be null.
- This is because the primary key value is used to identify individual rows in relation and if the primary key has a null value, then we can't identify those rows.

EMPLOYEE

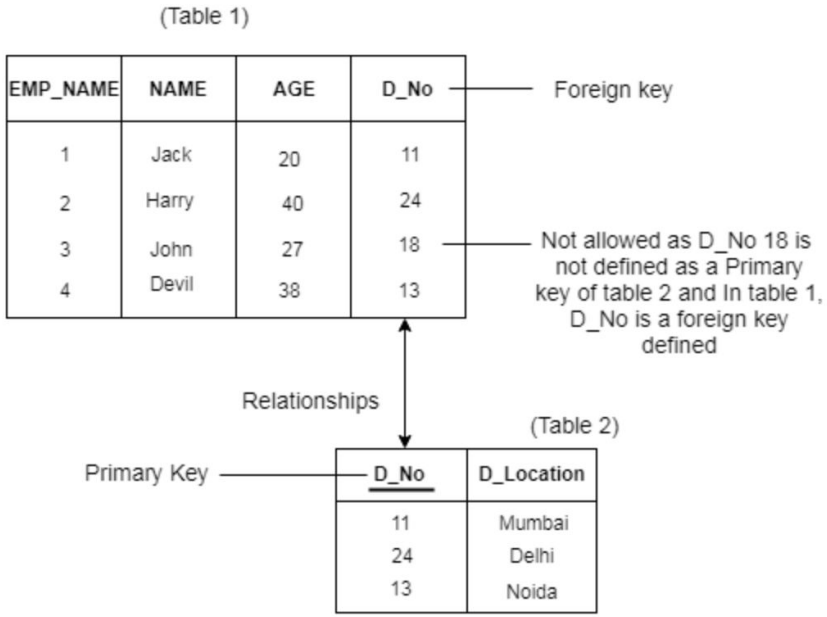
EMP_ID	EMP_NAME	SALARY
123	Jack	30000
142	Harry	60000
164	John	20000
	Jackson	27000

Not allowed as primary key can't contain a NULL value

Integrity Constraints

Referential Integrity Constraints

- A referential integrity constraint is specified between two tables.
- In the Referential integrity constraints if a foreign key in Table 1 refers to the Primary Key of Table 2, then every value of the Foreign Key in Table 1 must be null or be available in Table 2



Integrity Constraints

Key constraints

- Keys are the entity set that is used to identify an entity within its entity set uniquely.
- An entity set can have multiple keys, but out of which one key will be the primary key. A primary key can contain a unique and null value in the relational table.

ID	NAME	SEMENSTER	AGE
1000	Tom	1st	17
1001	Johnson	2nd	24
1002	Leonardo	5th	21
1003	Kate	3rd	19
1002	Morgan	8th	22

Not allowed. Because all row must be unique

SQL Constraints

W3schools SQL constraints

SELECT

W3schools select

WHERE

where