

# Relation DB, lec 1

What is DB? Sys to store

examples  $\rightarrow$  Relational (SQL)

$\rightarrow$  Graph

$\rightarrow$  key-value

$\rightarrow$  Column store

## Relational DB? (SQL)

$\rightarrow$  examples oracle, microsoft

$\rightarrow$  structure data stored in form of table/Relation

Column/headers, Row/tuple, Primary key

Scheme

## Relational algebra

تعاريف الجبر العلائقي

$\rightarrow$  جبر العلائقي

اعمال العلائقي

types of algebra

$\rightarrow$  elementary algebra  $+, -, \times, /$  (numbers)

$\rightarrow$  Boolean algebra AND, OR, NOT (Boolean values)

$\rightarrow$  Relational algebra (relations)

$\rightarrow$  basic operations (selection  $\sigma$ , projection  $\pi$ ,

Cartesian product  $\times$ , union  $\cup$ , difference  $-$ )

derived

inner join  $\bowtie$

outer join  $\dashv$