

Subject:DBMS
Topic:Relational Algebra

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Relational algebra

Relational algebra is a collection of operations on a relations.

Each operation takes one or more relation as its occurrence and produce another relation as its result.

Operations are classified into two

1. Unary operation.
2. Binary operation

Unary operation operate on one relation(select/project)

Binary operation operate on pair of relation(Union,Intersection....)

Select operation

It is select tuples(rows) from a relation(Table) denoted by Sigma(σ)

Syntax:- $\sigma_{(\text{select condition})}(\text{R})$

Example of select operation

Student.

SId	S name	S address
1	A	Abc
2	B	Efg
3	C	Ghj

$\sigma_{(sid=1)}(\text{student})$

SId	S name	S address
1	A	Abc

In select operation all a relational operators may be used(<,>,<=,>=,=)

Condition may be combined using and(^),or(v)

$\sigma_{(sid>1)}(\text{student})$

sid	sname	saddress
2	B	Efg
3	C	Ghj

(^) -- IT MEANS BOTH CONDITION MUST BE TRUE

(v) -- IT MEANS EITHER ONE OF CONDITION TRUE

FOR EXAMPLE

DETAILS OF STUDENTS WHOSE SID IS 1 OR 2

$\sigma_{(sid=1 \vee 2)}(student)$