

Relational Algebra special characters

November 17, 2024

| | |
|--------------------|--|
| selection | $\sigma_{cname < cname2 \wedge enr > 10000} E$ |
| projection | $\pi_{cname} E$ |
| aggregate function | $G_{g_1, g_2, \dots, h_1, h_2, \dots, h_m}$ |

Table 1: Unary operators

| | |
|-------------------|---------------------------------------|
| union | \cup |
| intersection | \cap |
| difference | $-$ |
| cartesian product | \times |
| division | \div |
| rename | ρ |
| natural join | \bowtie |
| theta join | \bowtie_{θ} |
| left semijoin | \ltimes |
| right semijoin | \rtimes |
| left outer join | $\ltimes\!\!\!\diagup$ |
| right outer join | $\rtimes\!\!\!\diagdown$ |
| full outer join | $\ltimes\!\!\!\diagdown\!\!\!\diagup$ |
| antijoin | $?$ |

Table 2: Binary operators

| | |
|-------------|----------|
| Logical AND | \wedge |
| Logical OR | \vee |
| Logical NOT | \neg |
| null | ω |

Table 3: Logic symbols and others

... continued

$Grades \leftarrow \Pi_{(students.ssn,students.name,grades.grade)}(\sigma_{students.ccn=grades.ccn \wedge grades.assignment=1}(students \times grades))$

$Grades \leftarrow \Pi_{(students.ssn,students.name,grades.grade)}$
 $(\sigma_{(students.ssn,students.name,grades.grade)}$
 $(students \times grades))$