**Relational Algebra:**

|  |  |
| --- | --- |
| π | Pi; project. E.g. π fName, lName(student) |
| σ | Sigma; select. E.g. σmajor=’CSCI’(student) |
| **\*** | Cartesian Product. E.g. student \* enroll |
| ρ | Rho/lo; rename. E.g. ρmajor <- deptCode(department) |
| ⋈ | Natural join. E.g. student ⋈ enroll |
| ꓴ | Set union. E.g. π classId(σStuId=100001(enroll)) ꓴ π classId(σStuId=100002(enroll) |
| ꓵ | Set intersection. E.g. π classId(σStuId=100001(enroll)) ∩π classId(σStuId=100002(enroll)) |
| - | Set difference. E.g. π stuId(σmajor= ‘CSCI’(student)) - π stuId(σfacId= 1012(enroll |x| class)) |
| ÷ or / | Division. E.g. π stuId, classId(enroll) ÷ π classId(σfacId=1014(enroll)) |
| ꓥ | And |
| ꓦ | Or |
| ¬ or ~ | Not |

**Relational Calculus:**

|  |  |
| --- | --- |
| ꓯ | For all |
| ꓱ | There exists |
| ∄ | There does not exist |
| ∈ | Belongs to |
| ∉ | Not belongs to |
| | | Such that |
| ⇒ | Implies (not supported in RC) |
| ⇔ or ≡ | Equivalent to (not supposed in RC) |