```
-- Example 1
-- Find the names of students who attend some course of the second class:
πName(πSID((σClass=2 Courses) ⋈ Gradebook) ⋈ Students)

-- Example 2
-- Find the SIDs of students who attend all courses of the first or all courses of the third class:
((πSID, CID Gradebook) ÷ (πCID σClass=1 Courses)) ∪
((πSID, CID Gradebook) ÷ (πCID σClass=3 Courses))


-- Task 1
-- a) Find the SIDs of students who attend some course of the first or second class:
πSID((σ(Class=1 ∨ Class=2) Courses) ⋈ Gradebook)

-- b) Find the SIDs of students who attend some course of the first class or have surname Valdez:
(πSID(σSurname='Valdez' Students)) ∪ (πSID((σClass=1 Courses) ⋈ Gradebook))

-- c) Find the SIDs of students who attend some course of the first and second class:
πSID(πCID(σClass=1 Courses) ⋈ Gradebook) ∩ πSID(πCID(σClass=2 Courses) ⋈ Gradebook)

-- d) Find the SIDs of students who attend all courses:
(πSID,CID Gradebook) ÷ (πCID Courses)

-- e) Find the SIDs of students who attend all courses of the third class:
(πSID,CID Gradebook) ÷ (πCID (σClass=3 Courses))

-- f) Find pairs of SIDs such that student with the first SID has better grade for some course than
the student with the second SID:
πA.SID,B.SID(ρA(Gradebook) ⋈ (A.SID ≠ B.SID ∧ A.Mark < B.Mark) ρB(Gradebook))

-- g) Find the CIDs of courses attended by at least two different students:
ρGradebook(πA.CID(ρA(Gradebook) ⋈ (A.SID ≠ B.SID ∧ A.CID = B.CID) ρB(Gradebook)))


-- Task 2
-- a) pi Name (pi SID ((sigma Class=1 Courses) join (sigma (Mark='A' or Mark='2') Gradebook)) join
Students)
+---------------+
| Students.Name |
+---------------+
| 'Warren'      |
+---------------+

-- b) (pi Name (pi SID ((sigma Class=1 Courses) join (sigma (Mark='A' or Mark='2') Gradebook)) join
Students)) ∩ (pi Name (pi SID ((sigma Class=2 Courses) join (sigma (Mark='A' or Mark='2') Gradebook))
join Students))
+---------------+
| Students.Name |
+---------------+
| 'Warren'      |
+---------------+

-- c) None

-- d) None
```