Relational Algebra Sample Question

Using the following two relations/tables:

STUDENT

STU_CODE	PROF_CODE
100278	
128569	2
512272	4
531235	2
531268	
553427	1

PROFESSOR

PROF_CODE	DEPT_CODE
1	2
2	6
3	6
4	4

- (a) Explain the process(steps) in terms of relational algebra operations which are used to produce a natural join. Write out each step in relational algebra form.
- (b) Show the output which will be produced from these two relations/tables when the following are carried out:
 - (i) equijoin of STUDENT to PROFESSOR
 - (ii) natural join of STUDENT to PROFESSOR
 - (iii) a right outer join of STUDENT to PROFESSOR, and a
 - (iv) full outer join of STUDENT to PROFESSOR