

## LAB 5 BOGDAN TATU

-- A

```
select COURSE.ID, COURSE.NAME, TEACHER.DEPARTMENT
  from TEACHER
 inner join COURSE
    on TEACHER.ID = COURSE.TEACHER_ID
 where TEACHER.NAME = 'Joe' and TEACHER.SURNAME = 'Mayor';
```

\* INNER JOINS – the course taught by the teacher is directly linked by the teacher id

-- B

```
select STUDENT.*
  from STUDENT
 inner join SIGNUP
    on STUDENT.ID = SIGNUP.STUDENT_ID
 inner join COURSE
    on SIGNUP.COURSE_ID = COURSE.ID
 where COURSE.NAME = 'Programming' and extract(year from SIGNUP.YEAR) between
 '2015' and '2025';
```

\* INNER JOINS – I only need students that are signed up to a course

-- C

```
select COURSE.*
  from COURSE
 inner join TEACHER
    on TEACHER.ID = COURSE.TEACHER_ID
 inner join DEPARTMENT
    on TEACHER.DEPARTMENT = DEPARTMENT.ID
 where DEPARTMENT.FACULTY = 'AC';
```

\* INNER JOINS – I only need courses that are taught by a teacher that belongs to a department

-- D

```
select distinct COURSE.NAME, STUDENT.DEPARTMENT
  from COURSE
 inner join SIGNUP
    on SIGNUP.COURSE_ID = COURSE.ID
 inner join STUDENT
    on STUDENT.ID = SIGNUP.STUDENT_ID
 where STUDENT.NAME = 'Ioan' and STUDENT.SURNAME = 'Popescu';
```

\* INNER JOINS – I only need courses that have the student signed up to them

```
-- E
select distinct STUDENT.*
  from STUDENT
 inner join SIGNUP
  on STUDENT.ID = SIGNUP.STUDENT_ID
 inner join COURSE
  on SIGNUP.COURSE_ID = COURSE.ID
 inner join TEACHER
  on TEACHER.ID = COURSE.TEACHER_ID
 where TEACHER.NAME = 'Joe' and TEACHER.SURNAME = 'Mayor'
```

\* INNER JOINS – I only need students that are signed up to a course, that course taught by a specific teacher

```
-- F
select COURSE.NAME, SIGNUP.YEAR, GRADE.ELP, GRADE.VALUE
  from GRADE
 inner join STUDENT
  on STUDENT.ID = GRADE.STUDENT_ID
 inner join SIGNUP
  on SIGNUP.STUDENT_ID = STUDENT.ID
 inner join COURSE
  on SIGNUP.COURSE_ID = COURSE.ID
 where STUDENT.NAME = 'Andrei' and STUDENT.SURNAME = 'Floraru';
```

\* INNER JOINS – Grades of a student that is signed up to the courses that grade belong to

```
-- G
select distinct STUDENT.NAME, STUDENT.SURNAME, COURSE.NAME, GRADE.VALUE
  from STUDENT
 left join SIGNUP
  on STUDENT.ID = SIGNUP.STUDENT_ID
 left join COURSE
  on SIGNUP.COURSE_ID = COURSE.ID
 left join GRADE
  on STUDENT.ID = GRADE.STUDENT_ID
```

\* LEFT JOINS – All students that are/are not signed up to a course. If signed up, they may/may not have a grade for that course

```
-- H
select DEPARTMENT.NAME, STUDENT.NAME, STUDENT.SURNAME
  from DEPARTMENT
 right join STUDENT
  on STUDENT.DEPARTMENT = DEPARTMENT.ID
```

\* RIGHT JOIN – Department of all students

```
-- I
select STUDENT.NAME, STUDENT.SURNAME, COURSE.NAME
  from STUDENT
 full join SIGNUP
    on STUDENT.ID = SIGNUP.STUDENT_ID
 full join COURSE
    on SIGNUP.COURSE_ID = COURSE.ID
```

\* FULL JOIN – Students that are/are not signed up to a course. Courses that may/may not belong to any student