# Homework 2

*Due: 27 January 2015*

### Problem 2.1

On a relation with the schema given for Problem 1.2 last week, write *relational algebra* expressions for the following queries:

a. The full names of all students

b. The record of the student with ID 90210

c. The student IDs of all students with a GPA lower than 1.0

d. The GPA of the student Terry Gilliam

### Problem 2.2

On the three-relation example we worked on in class on Tuesday (CSProf, MathProf, CourseDirs—note that a photo is posted to the course website) write relational algebra expressions for the following queries and constraints:

a. The course numbers for all courses taught by Blaheta. (Note: the string 'dblaheta' should not appear in your query.)

b. The names of all professors maintaining more than one course directory

c. Nobody can be both a math professor and a CS professor

d. Every course directory must be associated with a professor (either math or CS)