I. E-R model

Note: For ER-schema.txt you must use the translation specified in the lectures. The schema should be a <u>direct translation of your ER-diagram without any modifications</u>. Don't make any clever improvements when translating!

Hint: if your diagram does not contain at least one weak entity, at least one ISA relationship, and at least one many-to-at-most-one relationship, you have almost certainly done something wrong.

Hint: There are a number of relations, references and attributes missing in the schema from Task 1. If you end up with exactly the same thing you need to re-read the domain description and see if every aspect of it is present in your schema. A correct design would have **at least four additional relations** compared to Task 1.

(* means a table a new table/relation that did not exist in Task 1)

<u>Relational schema</u>

Students (<u>idnr</u>, login, name, program)

program -> Programs.name

StudentBranches (<u>student, branch, program</u>)

student -> Students.idnr

branch, program -> Branch (name, program)

Courses (<u>code</u>, credits)

Programs (<u>name</u>, abbreviation) *

ProgramDepartment (<u>program</u>, <u>department</u>) *

program -> Programs.name

department -> Departments.name

Departments (<u>name</u>, abbreviation) *

Branch (<u>name, program</u>)

program -> Programs.name

Classification (<u>name</u>)

Classified (<u>course, classification</u>)

course -> Courses.code

classification -> Classification.name

Taken (<u>student</u>, <u>course,</u> grade)

student -> Students.idnr

course -> Courses.code

Registered (<u>student</u>, <u>course</u>)

student -> Students.idnr

course -> Courses.code

PrerequisiteCourses (<u>course</u>, <u>prerequisiteCourse</u>) *

course -> Courses.code

prerequisiteCourse -> Courses.code

MandatoryBranch (<u>course</u>, <u>branch</u>, <u>program</u>)

course -> Courses.code

branch, program -> Branch (name, program)

MandatoryProgram (<u>course</u>, <u>program</u>)

     course -> Courses.code

     program -> Programs.name

RecommendedBranch (<u>course</u>, <u>branch</u>, <u>program</u>)

course -> Courses.code

branch, program -> Branch (name,program)

LimitedCourses (<u>course</u>, capacity)

     course ->Courses.code

WaitingList (<u>student</u>, <u>course</u>, position)

student -> Students.idnr

course -> LimitedCourses.code