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SQL Lab: Assignment 1 (until 07./08.12.2010)
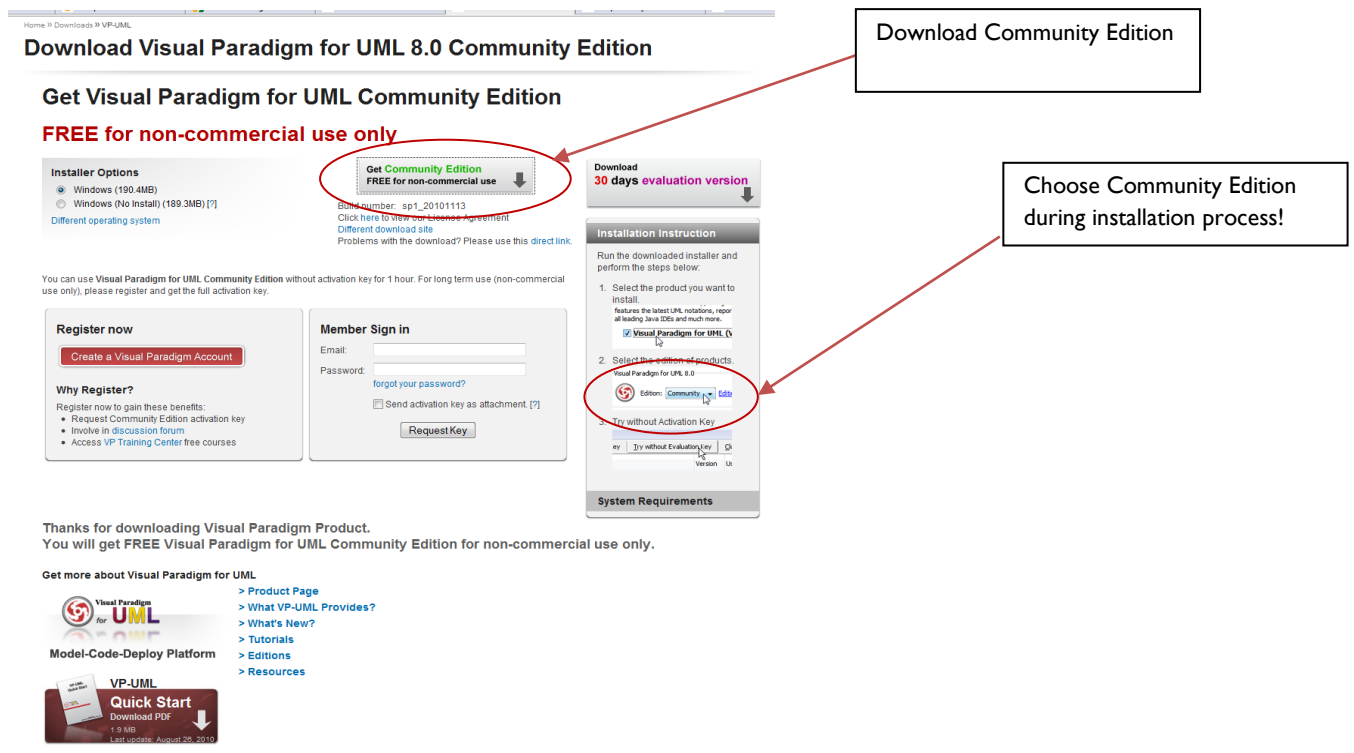
General Information

In this lab course, you have to work in teams of two (2) students each.

There are fixed dates for meeting up with your lab tutor for discussion and receiving new assignments, which you have to perform until the next meeting (consult your tutor for details about this).

Tools

During this first task, you will create a larger data model using suitable software tools. In general, you are **free to use any UML modeling tool** you like (drawing UML diagrams by hand is not permitted!).
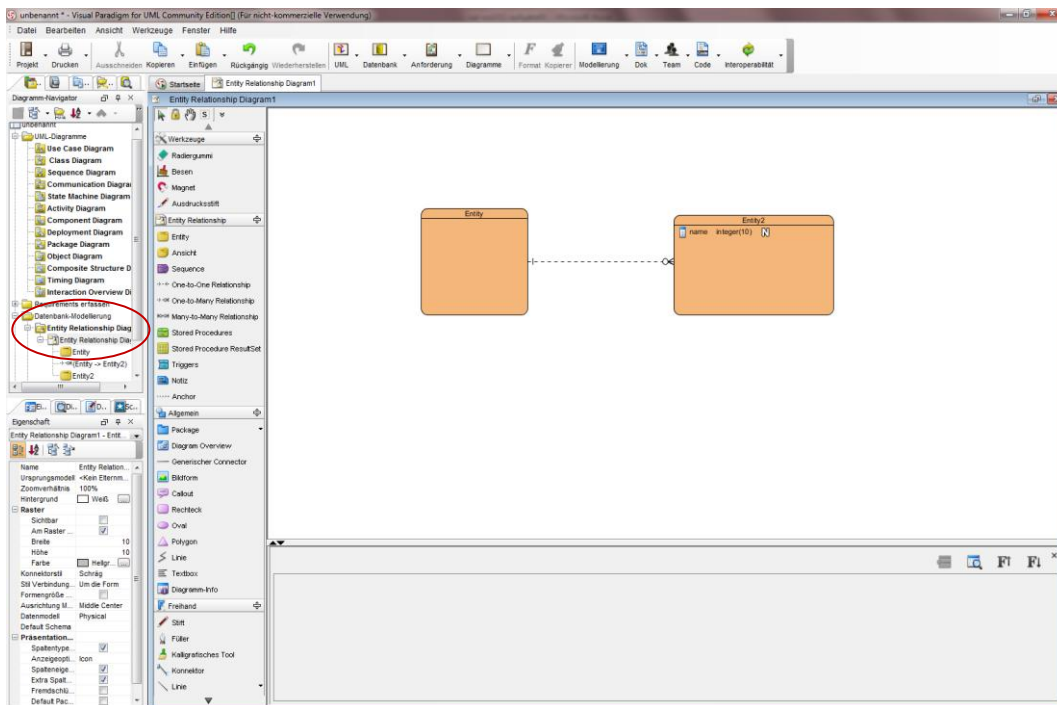
For example you can use the tool *Visual Paradigm for UML 8.0*. It is available in a Community Edition which s free to use. It can be downloaded here: http://www.visual-paradigm.com/download/vpuml.jsp?edition=ce.

Fter installing create a new project and use an Entity Relationship Diagram for modeling task.

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General Task

Use an UML Tool to model the mini-world described below. Keep several things in mind:

- You will later hand in your assignment on A4 **paper**. As your data model will be will be quite large, paper space will probably not suffice. Consider creating several diagrams showing different aspects or detail levels of your model.

- Use the package feature of UML (a package bundles several classes into a group). It may be a good idea having an overview diagram showing how packages relate to each other and then more detailed diagrams per package.

- Your tutor as well as your fellow students should be able to understand your model. Use comments, notes, and additional documentation!

- Keep in mind that most modeling tools use an internal data model containing all classes, associations, etc. Reuse parts of the model instead of creating new ones, if a class/package appears in multiple diagrams.

- Model attributes. Use default data types like string, integer, date, etc. whenever possible.

How to successfully pass the course

During the SQL lab, there will be six assignments to be worked on; the results of each team have to be handed in and will be graded by the team's tutor. There will be three possible

grades: "+1" (good), "0" (average), and "−1" (incomplete, insufficient, or missing). To successfully pass the SQL lab, the sum of all six grades must be positive (> 0).

Task for the first week

Scenario B

Your task is to create a database for an online video rental store: www.videobuster.de. In order to perform this task, review carefully the web pages and try to figure out which classes are needed and how they are related.

Take a look at the following examples:

- Movies: http://www.videobuster.de/titledtl.php/iron-man-2-121425.html
  - The needed attributes can be found in the details tab.
- Each user needs an account where a name, birth date, age, email-address and address is stored. Users are allowed to rate each movie and write short reviews. Furthermore, users may subscribe to different rental packages (http://www.videobuster.de/howto/wunschliste-1.html) and may choose different ways of payment.
- Keep in mind the different roles a person can have (actor, director, …). For example, search for 'Clint Eastwood'.
- Beside movies also games are available: http://www.videobuster.de/gamedtl.php/fifa-10-122163.html
- Take also into account that for each movie/game several copies are available. It is also necessary to store which user has which copy.