

University of Agder
Faculty of Economics and Social Sciences
16.11.2009

Exam

English

Course: IS-201

Course Name: Data Modelling and Database Systems

Date: 24.11.2009

Duration: 09.00-13.00

No. of pages including front page: 4

Allowed aids: Dictionaries (Norwegian/English/Italian)

Note: All questions should be answered

Question 4. SQL (5 x 8 = 40%)

We will be working with **ProRent.com**'s database which is described below. (PK is underlined. FK is *indented*.)

PropertyForRent (propertyNo, pAddress, rent, *ownerNo*)

PropertyOwner (ownerNo, oName)

Client (clientNo, cName)

Rent (*clientNo*, *propertyNo*, rentStart, rentFinish)

Use SQL to answer the following questions:

- The table Rent lacks a primary key and foreign key(s). Change the table so that these become defined.
- Make a view with only read access that shows data about properties and their owners.
- Create a query that for each owner (oName) summarizes the monthly rent for the properties owned by each person. Sort owners alphabetically.
- If you subtract rentStart from rentFinish you get the number of days a rent lasts. The price (rent for a property) is for each month. Assume that a month is 30 days. Calculate how much the client "Cynthia Hagen" in total has paid for each of the properties she has rented.
- List the names of any clients who have not rented any properties yet.

Good luck!