

OO-programming Exercise 1

Due Date and Time: Oct 19, 2009, 23:59

You should work out the exercises independantly.

Bring the sensibly documented program files with you (Files for Example. 5: `bsp_5.cpp`, `bsp_5_fkt.cpp`, `bsp_5_fkt.hpp`, etc.) on Laptop or USB-stick

1. Design a class that describes a cow by the following properties:

- name
- month and year of birth
- milk per month in liter
- weight

as private members of your class (encapsulation). Implement standard constructor, parameter constructor, copy constructor, destructor, assignment operator and output operator (`operator<<`), see §8 of the programming script¹. Use member initialization.

Implement methods to access the members (do you really need write access to all of them?).

Implement an additional method that calculates the value of your cow with respect to the weight (meat price!), the milk performance (milk price) and maybe also wrt. the age.

Can you store also meat price, milk price and number of cows in that class?

Use the keyword `const` whenever possible and test your class in a main program (you might write everything in one file for this first ex.).

Hint: If you use the `g++`-compiler than I recommend the warning options `-Wall -Werror -Woverloaded-virtual -W -Wfloat-equal -Wshadow -Wredundant-decls -Wunreachable-code`

which might write a lot of usefull warnings and you should have a closer look at these warning. Your code desgin will be much better if you change it until all warnings disappear.

Sometimes the header file `string` produces warnings. Please contact Prof. Haase in this case.

¹<http://www.uni-graz.at/~haasegu/Lectures/Kurs-C/Script/html/node82.html>