



Softwareentwicklung

Praktikum

[Tutorium]

vision

& [Gruppe 21, 23]



Themen fuer jetzt

Themen

CS

Exception

STL

Ex2

Fragen

- Codingstandard
- Exception
- STL
- Fragen



**Naechstes Tutorium am
01.06.2010**

Class-Generation

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Create new class

Class definition
Class name:
Arguments:

Has destructor Has copy ctor
 Virtual destructor Has assignment op.

Inheritance
 Inherits another class
Ancestor:
Ancestor's include filename:
Scope:

Member variables

 Add "Getter" method
 Add "Setter" method
 Remove prefix:

Documentation
 Add documentation where appropriate

File policy
 Header and implementation file shall be in same folder
Folder:
 Header and implementation file shall always be lower case:

Header file
Folder:
Filename:
 Add guard block in header file
Guard block:

Implementation file
 Generate implementation file
Folder:
Filename:
Header include:

Class-Generation

Themen

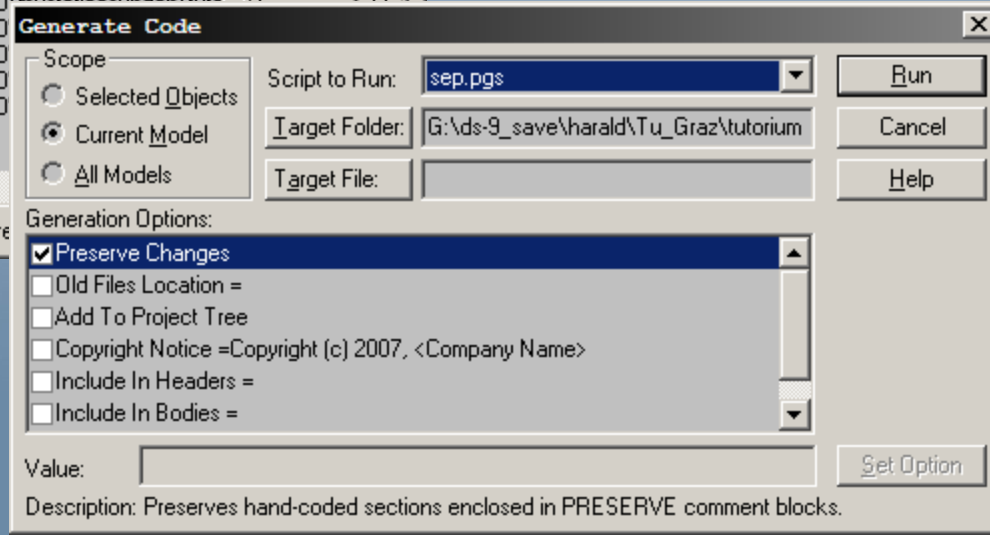
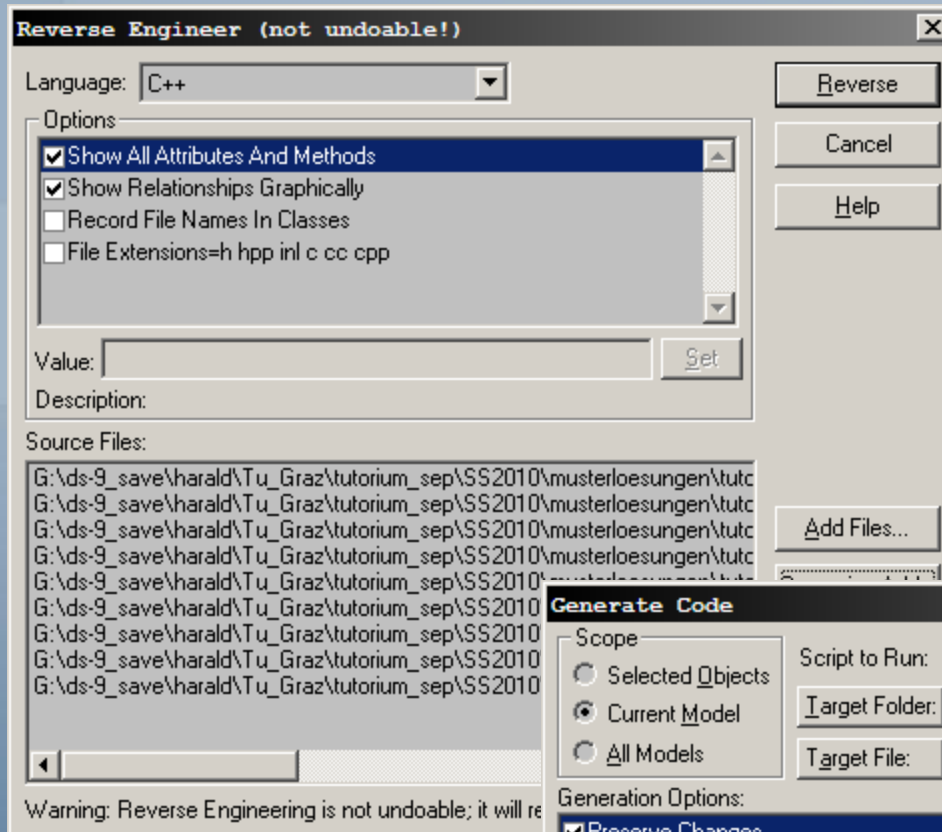
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Codingstandard

<http://www.stack.nl/~dimitri/doxygen/download.html#latestsrc>

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■ Class

```
//-----  
///  
/// Notebook  
///  
/// a simple storehouse  
///  
/// @author <Harald Altinger xx@iicm.tu-graz.ac.at>  
/// @version <1.0.0>  
class Storehouse
```

■ Funktion / Konstruktor:

```
//-----  
///  
/// special constructor  
/// @param string store_name name of storehouse  
Storehouse(std::string store_name);
```



Codingstandard

<http://www.stack.nl/~dimitri/doxygen/download.html#latestsrc>

Themen

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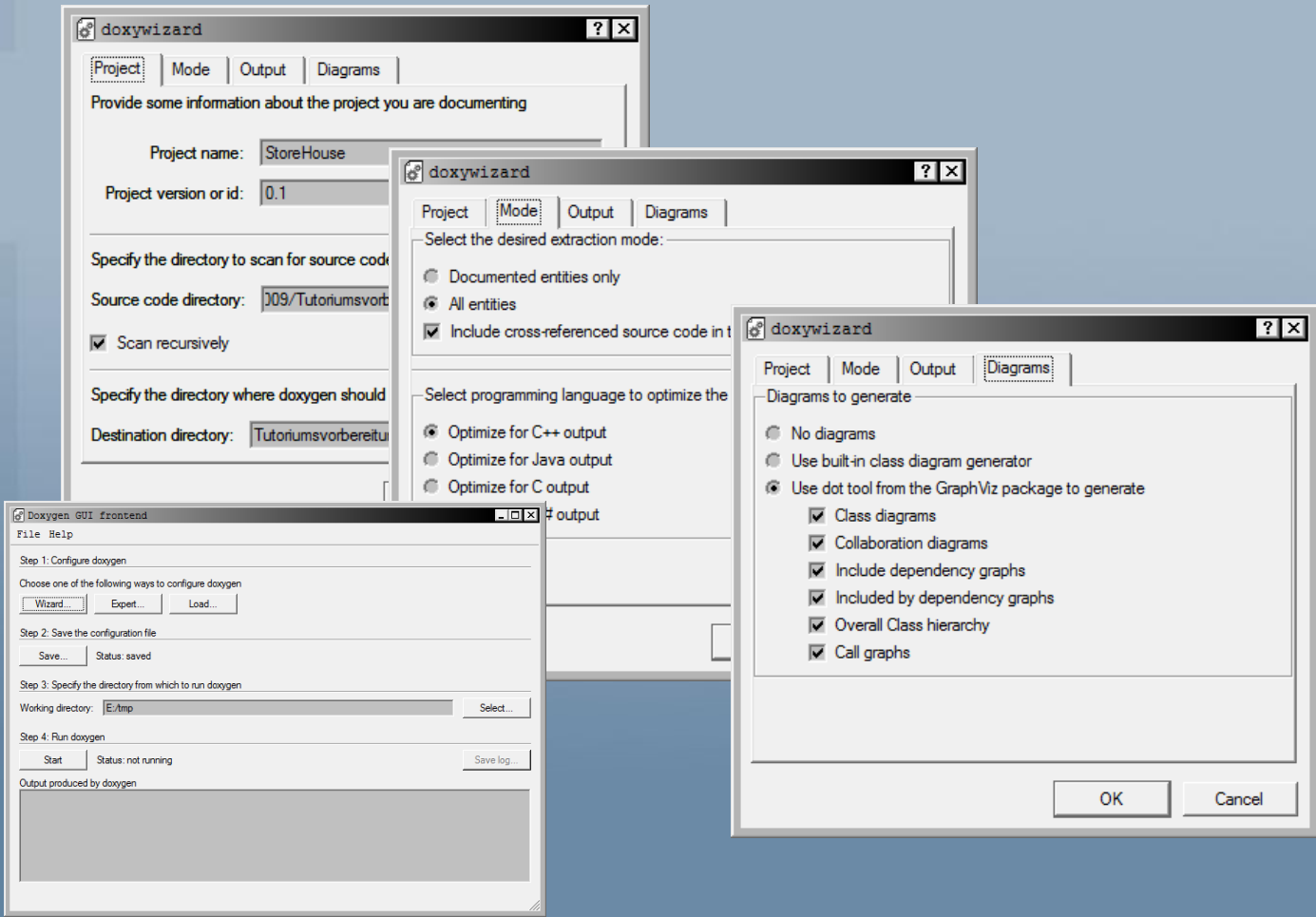
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■ Doxygen





Codingstandard

<http://www.graphviz.org/D>

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```
//-----  
///  
/// addNotebook  
/// @param Notebook notebook to add  
/// @return number of notebooks in store  
int addNotebook (Notebook* notebook_to_add);
```

```
147 Tu_Graz/tutorium_sep/SS2009/Tutoriumsvorbereitung/tut5/storehouse.h:44:  
Warning: The following parameters of Storehouse::addNotebook (Notebook *  
*notebook_to_add) are not documented:  
148 parameter notebook_to_add
```



Chapter 4

StoreHouse Class Documentation

<http://www.graphviz.org/D>

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4.1 Computer Class Referen

Version:

<1.0.0>

`#include <computer.h>`

Inherited by [Notebook](#).

Inheritance diagram for Computer:

Definition at line 12 of file computer.h.

4.1.2 Constructor & Destructor Documentation

4.1.2.1 Computer::Computer ()

default constructor

Definition at line 14 of file computer.cpp.

4.1.2.2 Computer::~~Computer () [virtual]

default destructor

Definition at line 19 of file computer.cpp.

4.1.2.3 Computer::Computer (const Computer &) [private]

default copyconstructor no copys!

Public Member Functions

- [Computer \(\)](#)
- [virtual ~Computer \(\)](#)
- [virtual void print \(\)=0](#)

Private Member Functions

- [Computer \(const Computer &\)](#)

4.1.3 Member Function Documentation

4.1.3.1 virtual void Computer::print () [pure virtual]

print will output the amount of ram and cpu model

Implemented in [Notebook](#).

The documentation for this class was generated from the following files:

4.1.1 Detailed Description

[Computer](#)

a simple computer, abstract class

Author:

<Harald Altinger xx@iicm.tu-graz

- G:/ds-9_save/harald/Tu_Graz/tutorium_sep/SS2009/Tutoriumsvorbereitung/tut5/computer.h
- G:/ds-9_save/harald/Tu_Graz/tutorium_sep/SS2009/Tutoriumsvorbereitung/tut5/computer.cpp



Fehlerbehandlung

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- Was tun, wie behandeln?

- Programm terminieren / Fehlerbehandlungsroutine

- Rückgabewert

- Return by Value `return -1;`
 - Return by Parameter

```
void printData(int &error_code, int param_1, ...)
```

- Errorflag `int global_error_filenoteread_;`

- Global (prozedural)
 - Membervariable (OOP)

- Exceptions

```
catch (fstream::failure &exception_all)
```

Fehlerbehandlung

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```
void function1()
{
    try
    {
        function2();
    }
}

void function2()
{
    MyClass object;
    ...
    function3();
}

void function3()
{
    throw MyExceptionType();
}

}

catch(MyOtherExceptionType&)
{
}

catch(MyExceptionType& e)
{
}
}
```



S

<http://www.cplusplus.com/reference/>

Themen

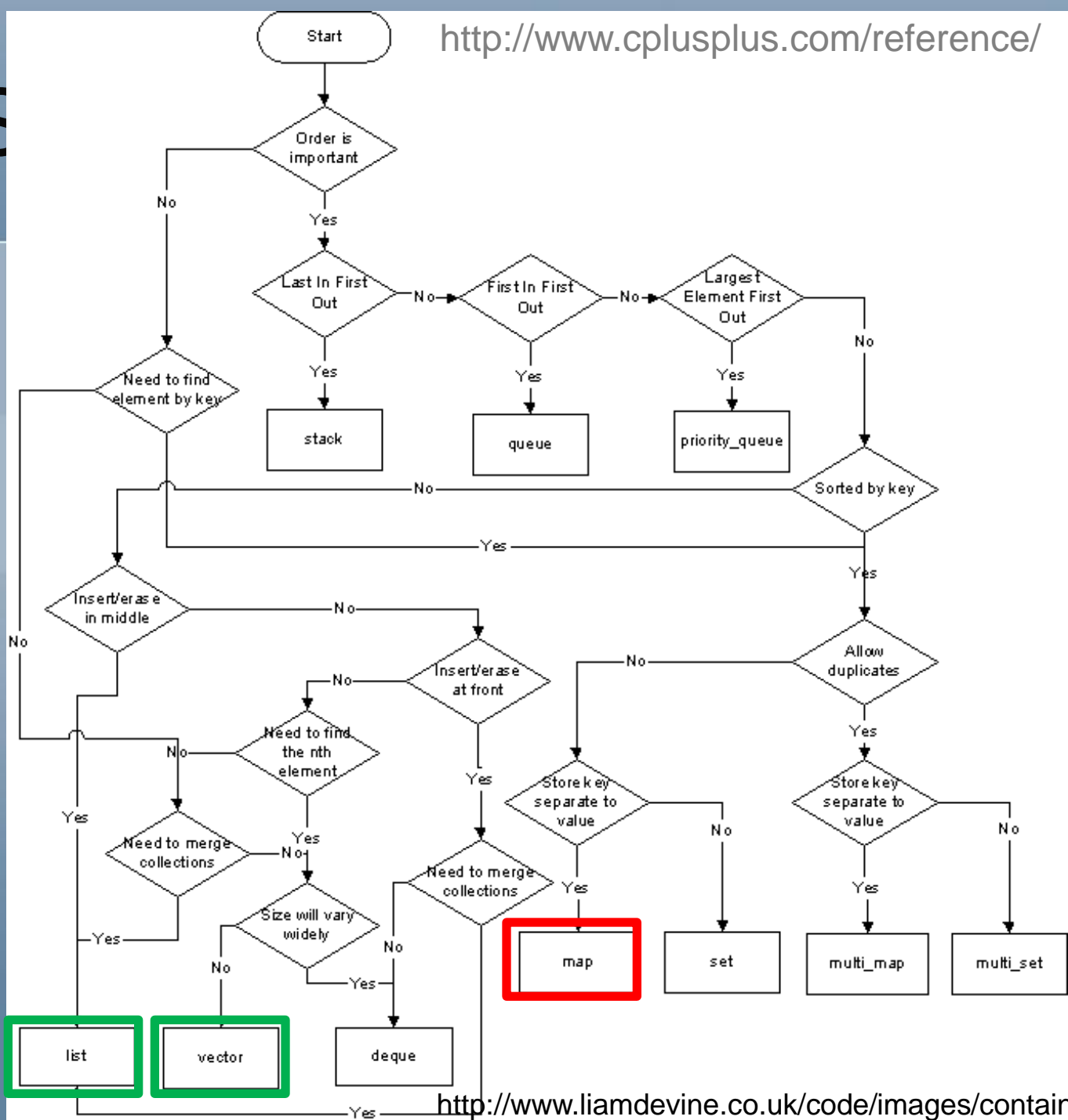
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<http://www.liamdevine.co.uk/code/images/container.png>

STL

```
1  #include <iostream>
2  #include <vector>
3  #include <map>
4
20  std::map<std::string, int> mixed_map;
21  mixed_map.clear();
22
23  mixed_map["Test 1"] = 1;
24  mixed_map["Test 3"] = 2;
25  mixed_map["Test 2"] = 3;
26
27  std::cout << mixed_map["test 2"] << std::endl;
28  std::cout << mixed_map["Test 2"] << std::endl;
29
30  map<std::string, int>::iterator current_find = mixed_map.find("Test 3");
31  map<std::string, int>::iterator prev = current_find;
32  map<std::string, int>::iterator next = current_find;
33
34  ++next;
35  --prev;
36
37  cout << "Prev: " << (*prev).first << endl;
38  cout << "Next: " << (*next).first << endl;
39
40  return 0;
41 }
```



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? Alle Klarheiten beseitigt ?

