Introduction

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“Object oriented programming and C++” course

References

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http://www.pd.infn.it/~ronchese/cxx
http://web.tiscali.it/paoloronch
then follow: ->Home page at INFN->Info corso di C++

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Aims and topics

main topics

- The C++ programming language
- The object-oriented programming

I cannot expect a 6-CFU course is enough to become expert programmers, but my aim is that at the end you have a rather precise idea of what can be done with C++ and a fairly good skill in exploiting C++ capabilities in the programs you write.

I hope you can have a bit of fun, too...

Outline

- A review of C/C++ basics
- A bit of C/C++ preprocessor
- Storage and linkage specifiers
- Composite objects
- Templates
- A few STL elements
- Inheritance and polymorphism
- C++ patterns

Examples will be shown for (almost) all the specific topics

Books

- S.Prata. *C++ Primer Plus*. Sams Publishing
- W.Savitch. *Absolute C++*. Pearson International Edition
- J.Liberty, S.Rao, B.Jones.
  Sams Teach Yourself: C++ in One Hour a Day.
  Sams Publishing
- A.Konig.
  Accelerated C++: Practical Programming by Example.
  Addison Wesley
- S.Meyers. *Effective C++*. Addison Wesley
- S.Meyers. *More Effective C++*. Addison Wesley
- B.Stroustrup.
  The C++ Programming Language.
  Addison Wesley

Organization

- Description of functionalities
- Demonstration with examples
- Exercises

Examples will be taken, when possible, from:

- nuclear-physics lab course
- subnuclear physics experiment

Exercises will become parts of an unique program doing a specific job

Prerequisites

A very basic knowledge of Linux and its most used commands is required

The C/C++ basics will be revisited, quite shortly

Exercises and examinations

Examples and exercises will be available by web

For each topic, on thw web pages you will find:

- Copy of the “slides” (PDF format)
- Copy of the shown examples
- Exercises with suggestions

The exercises will be part of the examination:

- Collection of files (readable!)
- Discussion

On your side?

Questions?

Comments?