

Computational Physics Lab

Auto-Doc Generation

Prof. Volker Crede

Department of Physics
Florida State University

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Automatic Documentation



A documentation system for C++, Java, and C...

- Generate on-line and off-line documentation
 - Output: HTML, RTF (MS-Word), PostScript, hyperlinked PDF, XML, and Unix man pages.
- Documentation extracted directly from the sources
- Can extract the code structure from undocumented source files

Doxygen Directives

- ◆ The comments in your code
 - ◆ `/// shortdescription`
 - ◆ `/** detailed description
... */`
 - ◆ Where?
 - ◆ Before
 - ◆ class definitions
 - ◆ function definitions
 - ◆ data declarations

Doxxygen: Examples

class

data type

function dec.

function def.

```
//           FILE: FractalPoint.h
/// An x-y point generator for a generic 2D fractal
/** This object takes a random number from [0,1) and calculates the next ....
*/
class FractalPoint {
    /// The value of the x coordinate
    double iX;
    ...
    /// Calculate a Fern Fractal point
    void setFern(double aRandom);
}
```

```
//           FILE: FractalPoint.cc
/** Calculate a Fern Fractal point
    Implement a Barnsley's Fern based on the following probabilities:
    (x, y) = ( 0.5, 0.27*y)          2%
              (-0.139*x+0.263*y+0.57,
               0.246*x+0.224*y-0.036)  15%
    ...
void FractalPoint::setFern(double aRandom){ ... }
```

Doxygen Configuration

- ◆ command line
 - ◆ % doxygen -g <project_name>.dox
 - ◆ Run doxygen in directory with source code
 - ◆ edit “<project_name>.dox” to tailor configuration
- ◆ Edit project.dox file and change:
 - ◆ PROJECT_NAME = IntegralCalculator
 - ◆ EXTRACT_ALL = YES
 - ◆ SOURCE_BROWSER = YES

Running Doxygen

doxygen project.dox

Doxygen will create a “html” directory
with the html generated documentation

For more information see:

<http://www.doxygen.org>