

Demo of admonition styles in DocOnce

H. P. Langtangen

Oct 5, 2015

Abstract

This note demonstrates how admonitions look like in the output format `pdflatex`.

1 The four main types of admonitions

Key options when compiling this document were

```
--latex_admon=colors1
```

Here is the warning admon:



Division by zero is illegal!

Most math systems will give fatal errors if you divide by zero.

```
Terminal> python -c 'print 4/0'  
Traceback (most recent call last):  
  File "<string>", line 1, in <module>  
ZeroDivisionError: integer division or modulo by zero
```

You should therefore be very careful with all expressions that may result in division by zero. In Python, you can use a `try-except` clause to test if some expression gives a `ZeroDivisionError` exception and take appropriate actions. One example of a numerical method where division by zero can cause problems is Newton's methods of finding solutions to algebraic equations $f(x) = 0$. In that algorithm, there is a division by $f'(x)$.

Question admon (without title).



Question

What are the admon options for `doconce format html`?

Summary admon:



Summary

The most popular methods for solving algebraic equations

$$f(x) = 0$$

are

- Newton's method
- The Bisection method
- The Secant method
- The Fixed-Point method ($f(x) = x - g(x)$)

Of these, Newton's method is fastest, the Bisection method is the most reliable, the Secant method is a simplified Newton method, and the Fixed-Point method is obviously very problem dependent in its behavior since the user has to define the g function.

Here is a *notice admon*:



Tip: follow well-established conventions for variable names!

For example, in Python, variable and function names use lower case letters separated by underscore, as in `vibration_with_damping` (while Java typically would have `vibrationWithDamping`). Class names apply cap words, as in `ProblemClass`.

The four main admons are warning, notice, question, and summary.

2 The block, quote and plain box environment

DocOnce features a `block` environment with or without title.

Blocks are often used in slides to frame a collection of things.

Block with title

Blocks can contain text, math, code, figures, movies.

Here is a quote environment (**quote**):

Sayre's law states that "in any dispute the intensity of feeling is inversely proportional to the value of the issues at stake."

By way of corollary, it adds:

"That is why academic politics are so bitter."

Source: [wikipedia](#)

Boxes are very simple frames (without any icons, background color, or stash, except for a shadow) used for important results like

The world most famous equation:

$$E = mc^2$$