

Test of editing markup

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Abstract

In this mini article we demonstrate the editing markup in DocOnce. This allows highlighting of corrections in a text.

1 A math story

Given $f(x)$. We seek the roots of f i.e. the x values for which $f(x) = 0$. The most famous method is Newton's method:

$$x_{k+1} = x_k - \frac{f'(x_k)}{f(x_k)}, \quad k = 0, 1, \dots$$

It needs x_0 . In theory this method has quadratic convergence, however it requires x_0 to be close to a root.

Problems with the text above.

Readers will normally find problems with the text above and a desire to edit. DocOnce features a syntax for editing running text. This syntax is demonstrated below. Markup for editing is not allowed in math blocks, code blocks, or section headings.

The text above is typeset as

`--Summary.-- In this mini article we demonstrate the editing
markup in DocOnce. This allows highlighting of corrections in
a text.`

`===== A math story =====`

`Given $f(x)$. We seek the roots of f i.e. the x values for which
$f(x)=0$. The most famous method is Newton's method:`

`!bt
\[x_{k+1} = x_k - \frac{f'(x_k)}{f(x_k)}, \quad k=0,1,\ldots \]
!et`

`It needs x_0. In theory this method has quadratic convergence,
however it requires x_0 to be close to a root.`

We now want to annotate this text with markup for our edits. Such markup has the syntax of *inline comments*, which are comments inside square brackets with an identifier and the comment text:

```
[identifier: some text]
```

The identifier can be a name (to recognize the reader who provided the comment), but in edit markup it is usually either `add`, `del`, or `edit`. The markup for editing consists of

```
[add: ,]
[add: .]
[add: ;]
[del: ,]
[del: .]
[del: ;]
[add: some text]
[del: some text]
[edit: some text -> some replacement for text]
```

In addition, one may provide an ordinary inline comment a la

```
[edit: change the title to *Root finding*.]
```

Below is the text with edits, followed by the rendering of how such edits look like in the present format (pdflatex).

Abstract

In this (edit 1:) ~~mini~~ article, (edit 2: add comma) we demonstrate the editing markup in DocOnce(edit 3:) ~~←This which~~ allows highlighting of corrections (edit 4:) ~~via colors~~ in a text.

2 A math story

edit 5: change heading to *Root finding*

Given (edit 6:) a function $f(x)$. We seek the roots of f , (edit 2: add comma) i.e., (edit 2: add comma) the x values for which $f(x) = 0$. (edit 9:) ~~The most~~ A famous (edit 10:) iterative solution method is Newton's method:

$$x_{k+1} = x_k - \frac{f'(x_k)}{f(x_k)}, \quad k = 0, 1, \dots$$

edit 11: error in right-hand side, the fraction $\frac{f'(x_k)}{f(x_k)}$ must be $\frac{f(x_k)}{f'(x_k)}$. (edit 12:) ~~It needs x_0~~ A start value x_0 is required. In theory, (edit 2: add comma) this method has quadratic convergence (edit 14: delete comma). (edit 15:

add period) (edit 16:) ~~h~~ However, (**edit 2:** add comma) (edit 18:) ~~#~~ the result requires x_0 to be close to a root.

To remove the edit markup and implement their implications, run

```
Terminal> doconce apply_edit_comments mydoc.do.txt
```

if the name of the DocOnce source file is `mydoc.do.txt`.