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:

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

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: .]
[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:

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

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:) ~~it~~ the result requires x_0 to be close to a root.

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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`.