

# Test of editing markup

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Aug 4, 2014

## 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.
```

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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).

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### 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:) ~~It~~ 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`.