# The lua-visual-debug package (V0.9)

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### January 4, 2023

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### 1 About

This package aids debugging your TEX and LATEX document by drawing rectangles around boxes and rules where glue is inserted. Other items are marked as well: kerns, hyphenation points and penalties.

### 2 How to use

When you load the package lua-visual-debug in your LualATEX document (or use \input lua-visual-debug.sty in plain TEX), LuaTEX will highlight boxes, penalties, glues and kerns in the PDF. This package requires you to process the document with LuaTEX (plain and LATEX formats).

# 3 A LATEX example

\documentclass{article}
\usepackage{lua-visual-debug}

\usepackage{lmodern}
\setlength\textwidth{300pt}

```
\setlength\textheight{10cm}
\begin{document}
\section{A short story}
A wonderful serenity has taken possession of my entire soul, like these sweet
mornings of spring which I enjoy with my whole heart. I am alone, and feel
the charm of existence in this spot, which was created for the bliss of souls like mine. I am so happy, my dear friend, so absorbed in the exquisite sense
of mere tranquil existence, that I neglect my talents \footnote {A very special}
     \hookrightarrow note for you}.
\begin{itemize}
  \item one
  \item two
  \item three
\end{itemize}
\verb|\bgroup| fontsize{30}{34} \\ | select font
\centerline{\TeX}
\egroup
\vbox{\strut Hello}\kern .5cm\vbox{\strut World}
\[ \int_e^x=mc^2 \]
\end{document}
yields
```

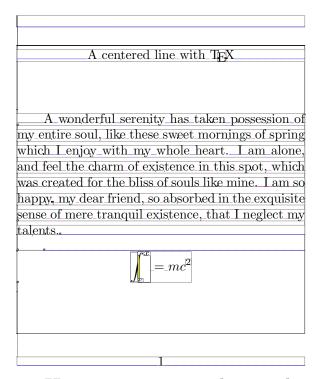
1 A short story.
A wonderful serenity has taken possession of my entire soul, like these sweet mornings of spring which I enjoy with my whole heart. I am alone, and feel the charm of existence in this spot, which was created for the bliss of souls like mine. I am so happy, my dear friend, so absorbed in the exquisite sense of mere tranquil existence, that I
neglect my talents.
one.
• 1 f.WO.
three.
Tex
Hello.
World.
$\int_{c_1}^{\infty} = mc^2$
HA very special note for you,
1
1

# 4 A plain T<sub>E</sub>X example

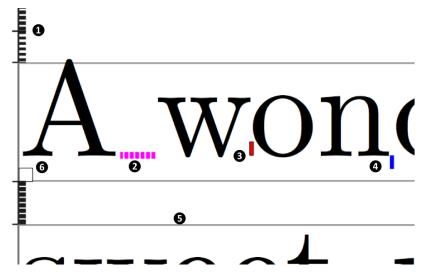
```
\input lua-visual-debug.sty
\hsize 3in \vsize 3in
\centerline{A centered line with \TeX}
\vskip .5in
```

A wonderful serenity has taken possession of my entire soul, like these sweet mornings of spring which I enjoy with my whole heart. I am alone, and feel the charm of existence in this spot, which was created for the bliss of souls like mine. I am so happy, my dear friend, so absorbed in the exquisite sense of mere tranquil existence, that I neglect my talents.

```
$$\int_e^x=mc^2$$
\bye
yields
```



5 How to interpret the markers



- $1.\ A$  vertical glue. Beginning and end are marked with a small tick. At the mark 1, two vertical glues are connected.
- 2. A horizontal glue. Blue dashed lines represent stretched glues, magenta lines represent shrunk glues, gray at their natural width.

- 3. A negative kern. Positive kerns are yellow.
- 4. A possible hyphenation point.
- 5. Horizontal and vertical boxes are drawn with a border.
- 6. Penalties are marked with a square. A penalty of 10,000 is marked with a blank square, a penalty less than 10,000 is filled with a gray square (that will improve in the future, currently it is grayness of penalty / 10000).

A strut box (zero width box) is marked with a red rule:



### 6 Copying

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