

T_EXtacular

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Overview

Idea

- Make L^AT_EX accessible to everyone
- Simplify creation of beautiful documents

Audience

- Users who prefer point-and-click and simple forms over manual creation of T_EX source
- Those less technically inclined

Initial view

The initial view of the ToKuscular application displays a form for generating an invoice. The form is titled "ToKuscular" and has tabs for "Letter", "Article", and "Invoice". The "Invoice" tab is selected. The form contains several input fields: "Address", "To", "Date", "Opening", "Content", "Closing", and "Signature". There are also buttons for "Compile", "View", "Clear", and "Options".

View after generating an invoice

The view after generating an invoice shows the completed invoice for "Yoo Bar". The form is titled "ToKuscular" and has tabs for "Letter", "Article", and "Invoice". The "Invoice" tab is selected. The form contains several input fields: "Company", "Address", "To", "Date", "Rate", "Hours", "Note", and "Signature". There are also buttons for "Compile", "View", "Clear", and "Options".

The invoice details are as follows:

Yoo Bar
123 Bar St
Sacramento, CA

Invoice To:
John Smith
321 Quail St

Date:
12 December 2013

Rate:
65

Hours:
2.0
3.0

Note:
Browsed Reddit

Signature:
Hours 10.0

Description of Services	Quantity	Unit Price	Amount
Did something	2.00 hours	\$65.00	\$130.00
Did something else	3.00 hours	\$65.00	\$195.00
Subtotal:	5.00 hours		\$325.00
Balance Due			\$325.00

Implementation Details

- Main frame contains a concrete `TemplatePanel` with inputs, a few buttons at the bottom, and a `PreviewPanel` on the right
- A `TeXHandler` class handles compilation of \TeX source
- Uses `latexmk` and a script (`res/bin/compile`) to compile
- `PreviewPanel` updates automatically with the contents of the compiled PDF
- Third party libraries
 - `MiGLayout`
 - `Sun PDF-Renderer`
 - `PgsLookAndFeel`

Difficulties & Concerns

- How best to handle template types
- Reasonable method of laying out components without a completely different strategy for each template type
- Auto-updating PDF panel and zooming (conversion of PDF to a `BufferedImage` – far from perfect)
- Handling application and `latexmk` compilation errors

Future

- Improve scrolling inside preview panel
 - Currently click and drag but can be flaky
- More general, approachable way for building templates
- Improve scaling of PDF preview
- Add “Save”, “Load”, “Print” options
- Add Windows support
- Add options dialogue for font/package selection and paper size