

## New features in 2.11 since 2.10

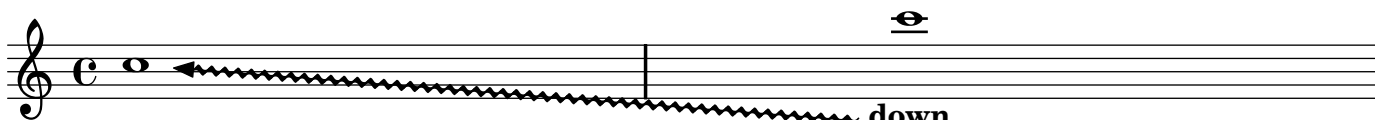
- A new page breaking function, `ly:minimal-breaking`, is dedicated to books with many pages or a lot of texts.
- A table of contents is included using `\markuplines \table-of-contents`. Elements are added to it using the `\tocItem` command.
- Text spreading over several pages is entered using the `\markuplines` keyword. Builtin markup list commands, such as `\justified-lines` or `\wordwrap-lines` may be used, and new ones created using the `define-markup-list-command` Scheme macro.
- Particular points of a book may be marked with the `\label` command. Then, the page where these points are placed can be referred to using the `\page-ref` markup command.
- Page breaking and page turning commands (`\pageBreak`, `\noPageBreak`, etc) can be used at top-level, between scores and top-level markups.
- The following options are now changed as a `-d` sub-option: `--backend`, `--safe`, `--preview` and `--no-pages` (which became `-dno-print-pages`). The `-b` option does not exist any more.
- Improved testing procedure now catch changes in CPU and memory performance, page layout, MIDI results and warnings. This helps to reduce the number of regression errors during development, resulting in more stable releases.

See [INSTALL.html#testing](#) for more information.

- Nested properties, such as `details` in `Slur`, can be reverted as well. The syntax for this is

```
\revert Slur #'(details closeness-factor)
```

- All line spanners are more flexible now in the configuration of their end points. This includes glissando, voice followers, text crescendos and other text spanners.



This feature was sponsored by Trevor Baa.

- The environment variable `LILYPONDPREFIX` has been renamed to `LILYPOND_DATADIR`.
- Notes or rests, such as a typical end note, that fill an entire measure are preceded by some more space.

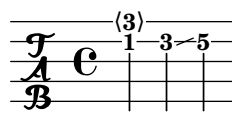


- All `\scores` in a lilypond-book fragment are now inserted into the document. Also, toplevel markups don't result in an entire page.

- Alterations (such as a sharp and flat) may now be arbitrary fractions. This allows some forms of microtonal music. For example, Turkish makam music uses 1/9th tone alterations.



- Tie directions may be set with `^^` and `_~`
- Tablature now supports harmonics and slides,



This feature was sponsored by Mike Amundsen

- Horizontal spacing now follows object outlines more accurately. This allows tighter horizontal spacing.



- Objects that belong outside of the staff are now positioned automatically to avoid collisions.

this goes above the previous markup

this doesn't collide with the c

 A musical staff in treble clef with a common time signature (C). The notation shows a series of notes with a dynamic marking 'f' (forte) below them. The text 'this goes above the previous markup' is positioned above the staff, and 'this goes below the dynamic' is positioned below the 'f' marking.

this goes below the dynamic

- Staves are spaced vertically using a skyline algorithm. This helps to avoid uneven vertical spacing.

