

`'+.ly'`

## 0.1 Introduction

This document shows all kinds of tips and tricks, from simple to advanced. You may also find dirty tricks, or the very very latest features that have not been documented or fully implemented yet.

In the web version of this document, you can click on the file name or figure for each example to see the corresponding input file.

This document is for LilyPond version 2.10.7.

(left blank intentionally)

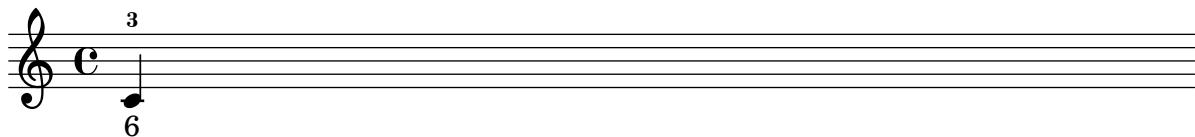
`'add-staccato.ly'`

Using `make-music`, you can add various stuff to notes. In this example staccato dots are added to the notes.



`'add-text-script.ly'`

You can add various stuff to notes using `make-music`. In this example, an extra fingering is attached to a note.



`'ambitus-mixed.ly'`

Ambits can be added per voice. In that case, the ambitus must be moved manually to prevent collisions.



`'ancient-accidentals.ly'`

Accidentals are available in different ancient styles, which all are collected here.



'ancient-font.ly'

Here are shown many (all?) of the symbols that are included in LilyPond's support of ancient notation.

The image displays four staves of musical notation, each featuring a unique set of symbols. The first staff uses square note heads and vertical stems. The second staff includes asterisks (\*), crosses (x), and a circled 'C'. The third staff features a mix of square and diamond-shaped note heads, along with vertical stems and a small diamond symbol. The fourth staff contains a variety of symbols including asterisks, crosses, a circled 'G', and a circled 'F'.

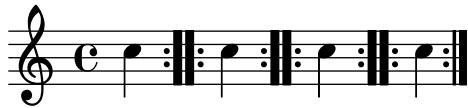
'ancient-time.ly'

Time signatures may also be engraved in an old style.



`'bar-always.ly'`

By setting `barAlways` and `defaultBarType`, barlines may be inserted automatically everywhere.



`'bar-lines-lyric-only.ly'`

You can move `Bar_engraver` and `Span_bar_engraver` to a different engraving context, if you want, for example, bar lines on lyrics.

A musical score with two staves. The top staff is in common time with a treble clef, showing three measures of lyrics: 'bla', 'die', and 'bla'. Vertical barlines are present between the measures. The bottom staff is also in common time with a treble clef, showing three measures of notes, but it does not have any vertical barlines.

`'bar-number-every-five-reset.ly'`

If you would like the bar numbers to appear at regular intervals, but not starting from measure zero, you can use a context function, `set-bar-number-visibility`, to set automatically `barNumberVisibility`, so that the bar numbers appear at regular intervals, starting from the measure in which `set-bar-number-visibility` is set using `\applyContext`.

A musical staff in common time with a treble clef, showing nine measures of notes. Above the staff, the letters 'A' and '5' are positioned above the staff, and '9' is positioned below the staff, indicating that the bar numbers 5 and 9 start at measure 5.

A musical staff in common time with a treble clef, showing eight measures of notes. Above the staff, the letters 'A' and '11' are positioned above the staff, and '15' is positioned below the staff, indicating that the bar numbers 11, 15, and 11 start at measure 11.

`'bar-number-show-all.ly'`

By default, bar numbers are printed only in the first measure. This setting can be overridden, so that bar numbers on start of every measure.

A musical staff in common time with a treble clef, showing three measures of notes. Above the staff, the letters 'A' and '4' are positioned above the staff, and '5' and '6' are positioned below the staff, indicating that the bar numbers 4, 5, and 6 start at measure 4.

A musical staff in common time with a treble clef, showing three measures of notes. Above the staff, the letters 'A' and '4' are positioned above the staff, and '5' and '6' are positioned below the staff, indicating that the bar numbers 4, 5, and 6 start at measure 4.

### `'beam-alternate.ly'`

The eighth notes may be seemingly attached to different beams, and the corresponding notes connected by ties (see also '`tie-cross-voice.ly`'). Such a situation may occur, for example, in the cello suites.



### `'beam-auto-4-8.ly'`

You can override the automatic beaming settings.



### `'beam-auto-override.ly'`

The auto-beamer, which can be overridden, will only engrave beams that end before encountering of

- a rest,
- an other, manually entered beam, or
- a bar line.

The `autoBeaming` can also be turned off.



### `'beam-control.ly'`

Beam positions may be controlled manually, by overriding the `positions` setting of the `Beam` grob.



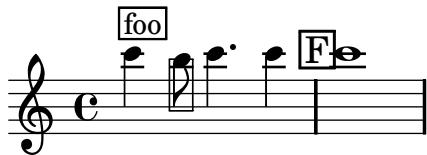
### `'beam-count.ly'`

You can alter the number of stems in a beam. In this example, two sets of four 32nds are joined, as if they were 8th notes.



'boxed-stencil.ly'

The `print-function` can be overridden to draw a box around an arbitrary grob.



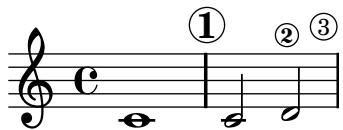
'caps.ly'

The font can be changed to small caps.



'circle.ly'

Circles can be drawn around various objects.



'compound-time.ly'

Compound time signatures can be printed. Automatic beaming works in compound time.



'coriolan-margin.ly'

In an orchestral score (Beethoven's Coriolan overture), there are different instrument groups, and some of the instruments may be transposed. Instruments are indicated either with a long or short name.

**Ouvertüre**  
**Zu Heinrich Joseph v. Collins Trauerspiel**  
**Coriolan**

Ludwig van Beethoven (1770-1827)

Allegro con brio

Op. 62

2 Flauti

2 Oboi

Clarinetti  
in B  $\flat$

2 Fagotti

Corni  
in E  $\flat$

2 Trombe  
(C)

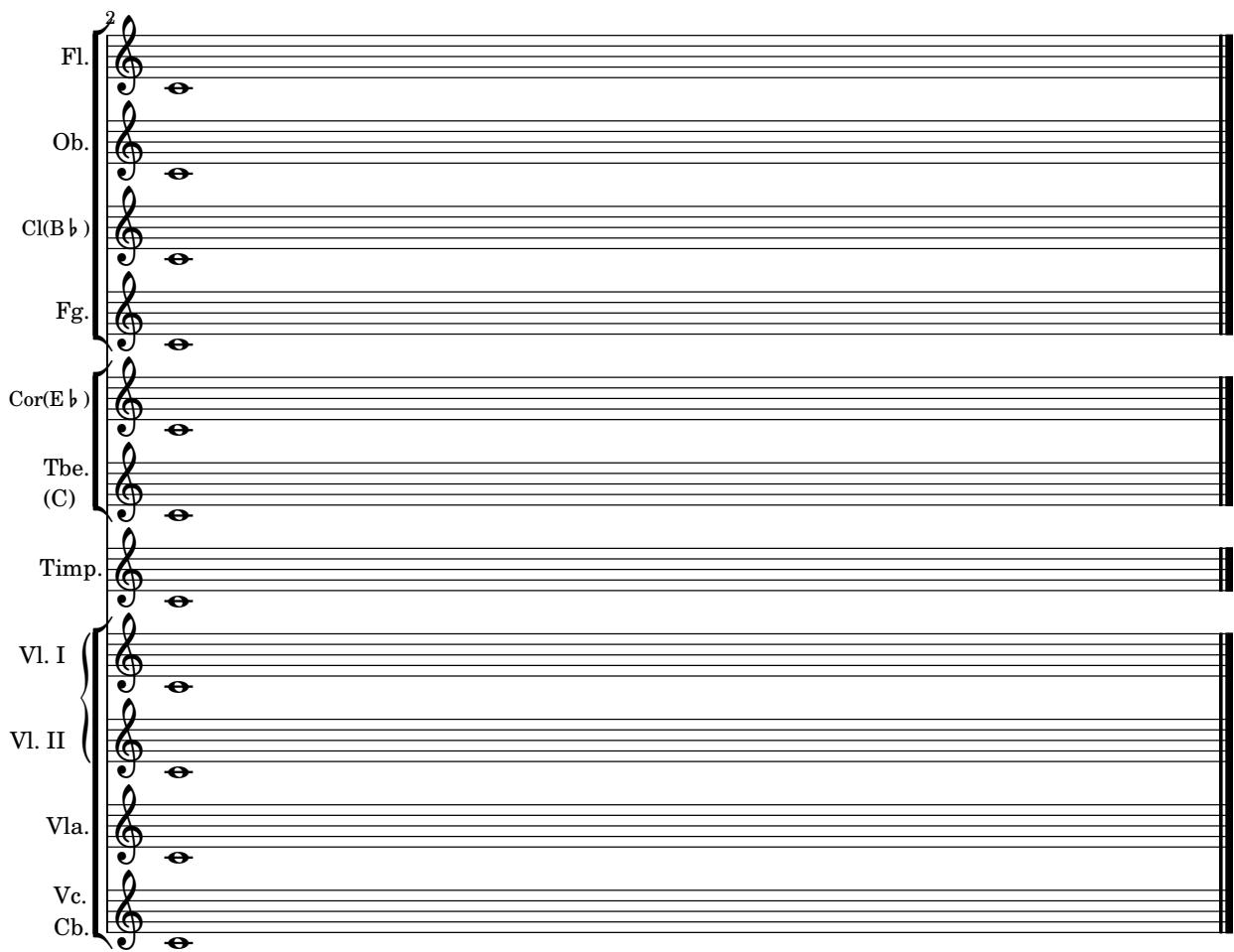
Timpani  
(C-G)

Violino I

Violino II

Viola

Violoncello  
e  
Contrabasso



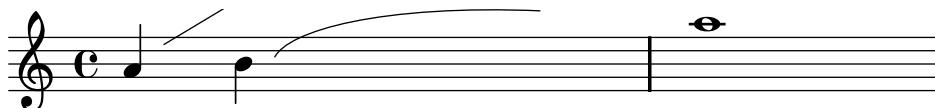
‘dynamic-extra.ly’

Più forte dynamics is produced using \markup.



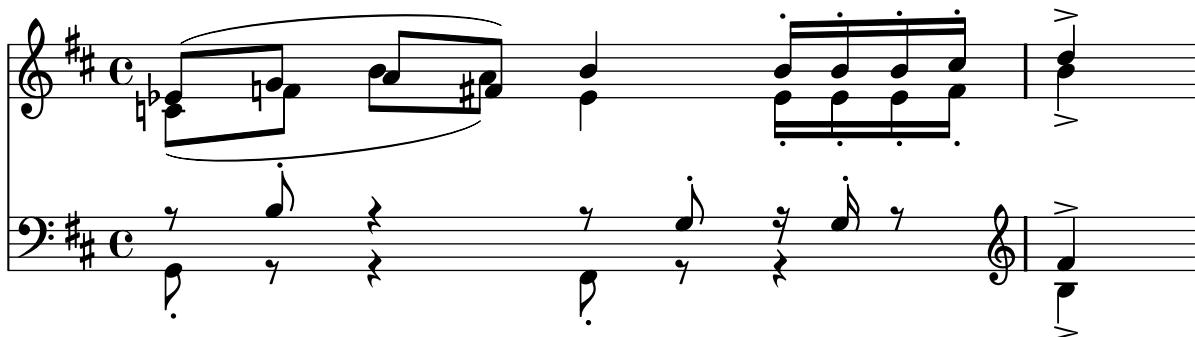
‘embedded-postscript.ly’

The markup command \postscript inserts postscript directly into the output.



‘engraver-contexts.ly’

In polyphonic notation, many voices can share a staff: In this situation, the accidentals and staff are shared, but the stems, slurs, beams, etc. are private to each voice. Hence, engravers should be grouped. The engravers for note head, stems, slurs, etc. go into a group called “Voice context”, while the engravers for key, accidental, bar, etc. go into a group called “Staff context”. In the case of polyphony, a single Staff context contains more than one Voice context. Similarly, more Staff contexts can be put into a single Score context.



‘engraver-one-by-one.ly’

The notation problem, creating a certain symbol, is handled by plugins. Each plugin is called Engraver. In this example, engravers are switched on one by one, in the following order:

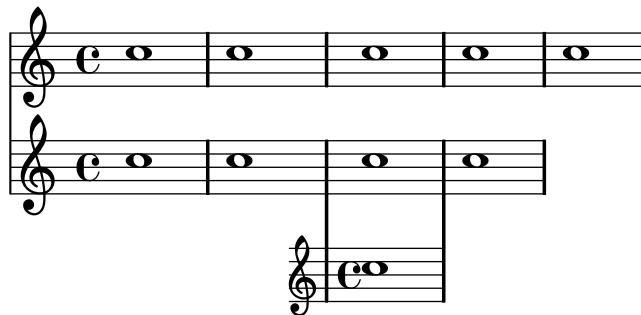
- note heads,
- staff symbol,
- clef,
- stem,
- beams, slurs, accents,
- accidentals, bar lines, time signature, and key signature.

Engravers are grouped. For example, note heads, slurs, beams etc. form a Voice context. Engravers for key, accidental, bar, etc. form a Staff context.



**'extra-staff.ly'**

You can add (possibly temporarily) an extra staff after the beginning of a piece.



**'fret-diagram.ly'**

Frets are supported as markup commands.

3

D      D      D

x x o    x x o    x x o

TAB: 134211    134211    134211

TAB Fret Diagrams:

- 134211 (D chord)
- 134211 (D chord)
- 134211 (D chord)

3

F#      F#      F#

134211    134211    134211

TAB: 134211    134211    134211

TAB Fret Diagrams:

- 134211 (F# chord)
- 134211 (F# chord)
- 134211 (F# chord)

5

C      C      C

x 134211    x 134211    x 134211

TAB: 134211    134211    134211

TAB Fret Diagrams:

- 134211 (C chord)
- 134211 (C chord)
- 134211 (C chord)

7

x oooxx    x oooxx    x oox    x xx    x xx

TAB: oooxx    oooxx    oox    xx    xx

TAB Fret Diagrams:

- oooxx
- oooxx
- oox
- xx
- xx

10

x ooooo

TAB: ooooo

TAB Fret Diagram:

- ooooo

'gregorian-scripts.ly'

Here is demonstrated a preliminary support of Gregorian Scripts:  
ictus, circulus, semicirculus, accentus, episem.



'header-ifelse.ly'

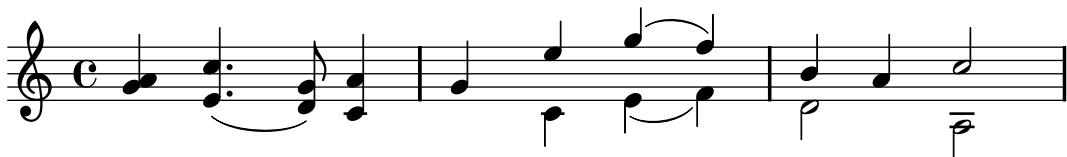
High level functionality (eg. conditional defines), can be accomplished with GUILE.  
This example puts the current version in the title via Scheme.

## Title has version 2.10.7



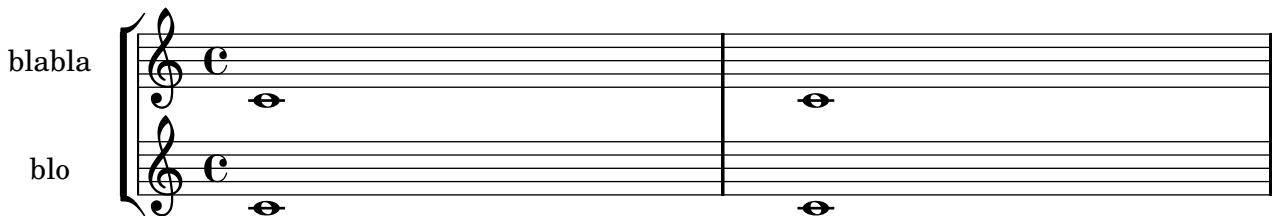
'hymn.ly'

You can combine two parts on the same staff using the part combiner. For vocal scores (hymns), there is no need to add solo/a2 texts, so they should be switched off.



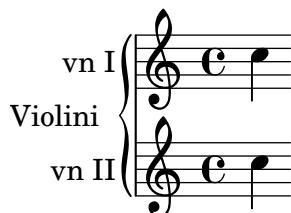
'instrument-name-align.ly'

instrument names may be aligned manually by putting the names in padded boxes with \markup.



'instrument-name-grandstaff.ly'

You can have a name for the whole GrandStaff in addition to individual Staffs.



'ligature-vaticana.ly'

Vaticana ligature uses four staff lines, special clef, and calligraphic notes. Augmentum dots are collected behind ligatures.



Al-



le-



lu-

ia.

'lilypond-testpage.ly'

All header fields with special meanings.

**localtitle**

**localsubtitle**

localpoet

**localinstrument**

localcomposer

localarranger

localpiece

localopus



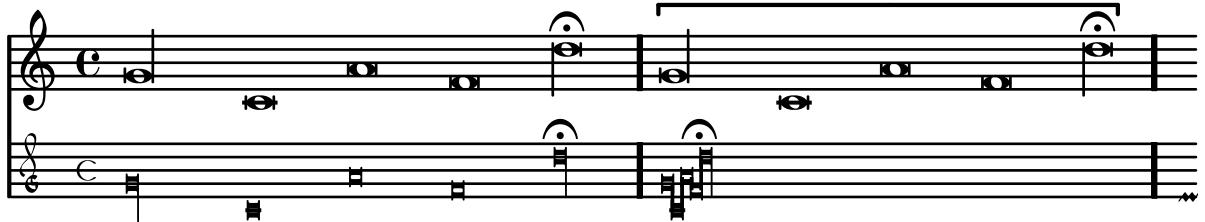
piece

opus



‘mensural-ligatures.ly’

In mensural ligatures, notes with ancient durations are printed in a tight manner.



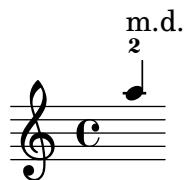
‘mensural-note-heads.ly’

Mensural notes may also have note heads.



‘move-specific-text.ly’

Objects, like text, can be moved around by using some Scheme code.



‘music-box.ly’

This example shows prelude in C major of WTK1, but coded using Scheme functions to avoid typing work.

The image shows a single staff of musical notation using a treble clef and common time (C). It depicts a prelude in C major with various note heads, stems, and rests, illustrating the result of using Scheme functions to generate the music.

`'music-creation.ly'`

You can engrave music using just Scheme expressions. Although those expressions reflect the inner mechanism of LilyPond, they are rather clumsy to use, so avoid them, if possible.



`'no-bar-lines.ly'`

Engravers can be removed one by one. Here, the time signature and bar lines have been removed.



`'no-key-at-end-of-line.ly'`

According to normal typesetting conventions, LilyPond typesets key changes at the end of the line, when the change appears at a line break. This example shows how to change this default to only print the new key signature at the beginning of the next line.

Two musical staves. The first staff shows a treble clef, common time, and quarter notes. The second staff shows a treble clef, 3/4 time, and quarter notes. The key signature changes from C major to G major at the start of the second staff.

`'partial-blank.ly'`

When entering partially typeset music (i.e. for students to be completed by hand), you may need the spacing that correspond to the timing of notes: all measures have same length, etc. It can be implemented by adding an invisible staff with a lot of fast notes.

Two musical staves. The top staff has a treble clef and common time. The bottom staff has a bass clef and common time. Both staves have a vertical bar line in the middle. The top staff has a measure of quarter notes followed by a measure of eighth notes. The bottom staff has a measure of eighth notes followed by a measure of quarter notes.

Two musical staves. The top staff has a treble clef and 3/4 time. The bottom staff has a bass clef and common time. Both staves have a vertical bar line in the middle. The top staff has a measure of a whole note followed by a measure of quarter notes. The bottom staff has a measure of quarter notes followed by a measure of eighth notes.

`'preset-extent.ly'`

The object may be extended to larger sized by overriding their properties. The lyrics in this example have an extent of `(-10,10)`, which is why they are spaced so widely.

`foo`      `bar`      `baz`

`'rests.ly'`

Rests may be used in various styles.

A musical staff in common time (indicated by a 'C') and G major (indicated by a treble clef). The staff consists of five horizontal lines. A continuous line of rests spans the entire length of the staff, starting from the beginning and ending at the end of the staff.

A musical staff in common time (indicated by a 'C') and G major (indicated by a treble clef). The staff consists of five horizontal lines. A continuous line of rests spans the entire length of the staff, with each rest having a vertical stem extending downwards from its top edge.

A musical staff in common time (indicated by a 'C') and G major (indicated by a treble clef). The staff consists of five horizontal lines. A continuous line of rests spans the entire length of the staff, with each rest having a vertical stem extending downwards and a small vertical stroke at its bottom edge.

A musical staff in common time (indicated by a 'C') and G major (indicated by a treble clef). The staff consists of five horizontal lines. A continuous line of rests spans the entire length of the staff, with each rest having a vertical stem extending downwards and a small vertical stroke at its bottom edge.

`'reverse-music.ly'`

Symmetric, or palindromical music can be produced, first, by printing some music, and second, by printing the same music applying a Scheme function to reverse the syntax.

A musical staff in common time (indicated by a 'C') and G major (indicated by a treble clef). The staff consists of five horizontal lines. It features a symmetrical pattern of eighth notes and rests, forming a palindromic shape that reads the same forwards and backwards.

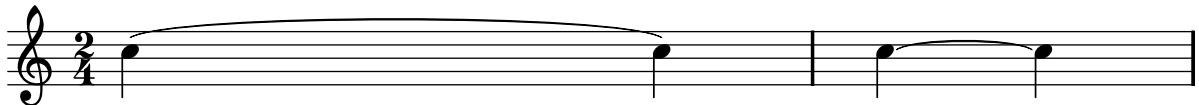
`'slur-manual.ly'`

In extreme cases, you can resort to setting the `control-points` of a slur manually, although it involves a lot of trial and error. Be sure to force line breaks at both sides, since different horizontal spacing will require rearrangement of the slur.

A musical staff in common time (indicated by a 'C') and G major (indicated by a bass clef). The staff consists of five horizontal lines. It features a complex pattern of eighth notes and sixteenth notes, with several slurs applied to groups of notes. The slurs are drawn with straight lines connecting the notes, indicating specific control points for manual adjustment.

‘slur-minimum-length.ly’

By setting the minimum length of a slur, notes are more separated.



‘smart-transpose.ly’

There is a way to enforce enharmonic modifications for notes in order to have the minimum number of accidentals. In that case, “Double accidentals should be removed, as well as E-sharp (-> F), bC (-> B), bf (-> E), B-sharp (-> C).”, as proposed by a request for a new feature. In this manner, the most natural enharmonic notes are chosen in this example.



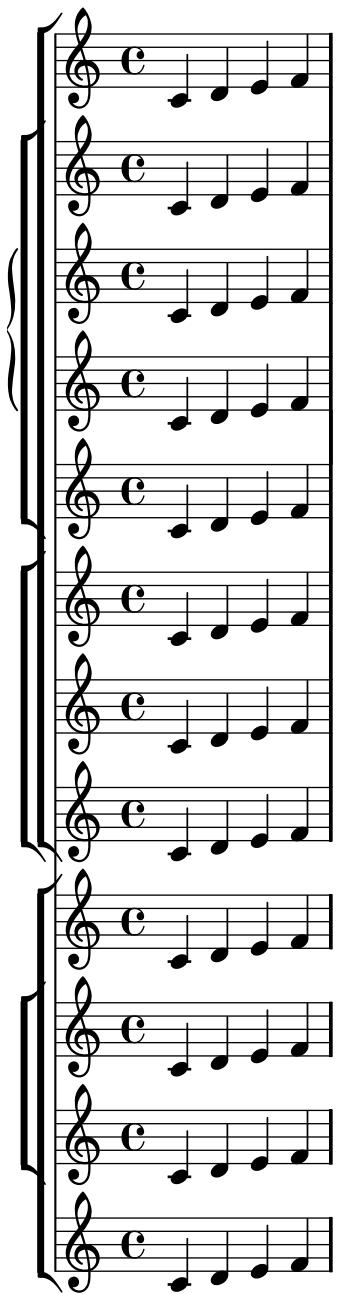
‘spacing-optical.ly’

Stem directions and head positions are taken into account for spacing



‘staff-bracket.ly’

Staffs can be nested in various combinations. Here, `StaffGroup` and `ChoirStaff` produce similar straight brackets, whereas `GrandStaff` produces curly brackets. In `InnerStaffGroup` and `InnerChoirStaff`, the brackets are shifted leftwards.



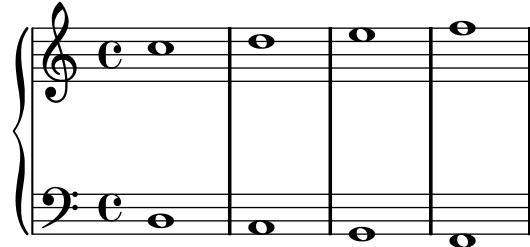
'staff-container.ly'

In this preliminary test of a modern score, the staff lines are washed out temporarily. This is done by making a tuned `StaffContainer`, which \skips some notes without printing lines either and creates a `\new Staff` then in order to create the lines again. (Be careful if you use this; it has been done by splitting the grouping `Axis_group_engraver` and creating functionality into separate contexts, but the clefs and time signatures may not do what you would expect.)



'staff-lines.ly'

The number of lines in a staff may changed by overriding `line-count` in the properties of `StaffSymbol`.



`'staff-size.ly'`

In order to change staff sizes, both `staff-space` and `fontSize` must be scaled.



`'stem-extend.ly'`

Extending stems to the center line may be prevented using `no-stem-extend`.



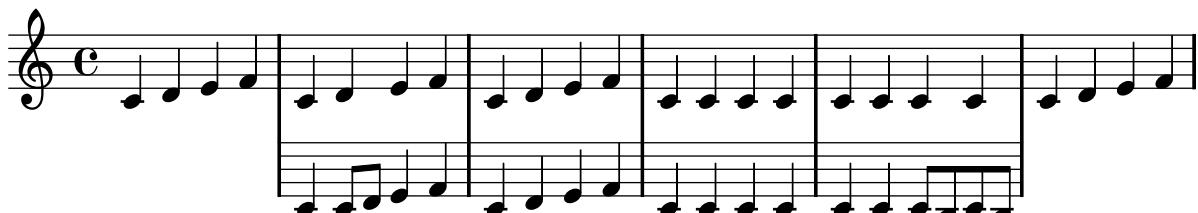
`'tablature-hammer.ly'`

A hammer in tablature can be faked with slurs.



`'temporary-stave.ly'`

An additional stave can be typeset in the middle of a score line. A new context type is created for the temporary staff to avoid printing time and key signatures and clef at the beginning of the extra stave.



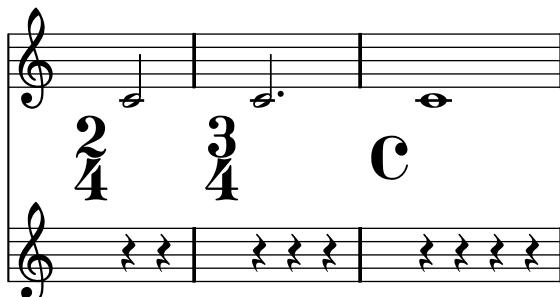
`'text-spanner.ly'`

Text spanners can be used in the similar manner than markings for pedals or octavation.



`'time-signature-staff.ly'`

Time signatures may be put on a separate staff. This is used contemporary pieces with many time signature changes.



`'version-output.ly'`

By putting the output of `lilypond-version` into a lyric, it is possible to print the version number of LilyPond in a score, or in a document generated with `lilypond-book`. Another possibility is to append the version number to the doc-string, in this manner: 2.10.7

Processed with LilyPond version 2.10.7

`'vertical-extent.ly'`

Vertical extents may increased by setting `\override VerticalAxisGroup #'minimum-Y-extent`, `extra-Y-extent`, and `Y-extent`. In this example, `Y-extent` is increased.

15-deep staff

A musical staff starting with a bass clef, followed by the letter 'C', then an open circle representing an 'E' note.

10

1

10-high staff

A musical staff consisting of five horizontal lines. A bass clef is positioned at the top left. In the center, the letter 'c' is written above a note head. Below the note head is a small oval symbol.

'volta-chord-names.ly'

Volta brackets can be placed over chord names. Just set the `voltaOnThisStaff` property to true for the `ChordNames` context and to false for the topmost ordinary Staff context.

1.-2.

A musical staff consisting of five horizontal lines. On the first line, there is a clef symbol (G-clef) followed by a note head with a vertical stem pointing down and a small circle below it. Above this note head is the letter 'c'. A vertical bar line divides the staff into two measures. In the second measure, there is another note head with a vertical stem pointing down and a small circle below it. Above this note head is the letter 'c'.