OrchestralLily
A Package for Professional Music Publishing with LilyPond and \LaTeX

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Overview

1. Requirements for Professional Music Publishing
   • Contents of Editions

2. LilyPond for Music Typesetting

3. Structure of a Score

4. OrchestralLily

5. Text parts of Editions: Preface & Cover

6. Templates

7. Availability of OrchestralLily
Typical Contents of a Professional Edition

- **Full score**, including:
  - Nice cover page, inside title page
  - Table of contents
  - Preface: Introduction, Biography, Lyrics, etc.
  - The full score itself (including editorial markings), possibly consisting of multiple movements; Some instruments share one staff
  - Critical report
- Orchestral parts: One part per instrument, containing cue notes to other instruments
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Johann Strauss (Sohn)

The father tried to keep him away from music, but the son insisted on it. He was born as Joachim Christian Strauss in 1825 in Vienna, Austria. His father, Johann Strauß Sr., a famous dance music composer as well, who did not want his son to become a musician, and the son did not like his father's music. However, the son was determined to become a musician and started to study music at a young age.

In 1846, Strauss's oeuvre includes 20 operettas (including "Die Fledermaus", "Die lustigen Weiber von Sizilien", and "Die äußere Wäscherin"). He also wrote over 500 waltzes, polkas, and quadrilles. His most famous waltz "The Blue Danube" became his signature piece.

In 1853, during his recovery, Strauss was appointed as the director of the Vienna Court Opera, a post he held until his death. He was also appointed as the director of the Vienna State Opera in 1857.

From 1854 to 1858, Strauss formed the "Wiener Männergesangverein" (Vienna Male Choral Society). He was also appointed as the director of the Vienna Court Orchestra in 1857.

During the 1860s, Strauss composed many more operettas and waltzes, including "Der Zigeunerbaron", "Die Fledermaus", and "Die lustigen Weiber von Sizilien". He also became the most famous waltz composer in the world.

In 1862, he married the actress Angelika Dittrich, but they separated a few years later. As the couple was childless, Strauss's father tried to keep him away from music, but the son insisted on it. He was born as Joachim Christian Strauss in 1825 in Vienna, Austria. His father, Johann Strauß Sr., a famous dance music composer as well, who did not want his son to become a musician, and the son did not like his father's music. However, the son was determined to become a musician and started to study music at a young age.

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Different Requirements for Different Score Types

**Different Page and Staff Sizes**

- **Full Score**: very large (30x20cm) with small staves (5mm)
- **Miniature Score**: very small (A5 or smaller) with even smaller staves
- **Orchestral Parts**: large (A4 or larger) with large staves (7-8 mm)
- **Choral Score**: A4 with medium staff size
- **Vocal Score**: Smaller than A4 (27x19cm) with medium staff size
Different line breaking

- **Full Score:** As much as possible on a single page, position of turns nor very important (except: Organ / piano playing from full score)
- **Vocal Score:** Turns before/after difficult onsets not advisable
- **Orchestral Parts:** Turns only during breaks (for strings also at other spots)

Different Content

- **Full Score:** Editorial markings (brackets, footnotes, etc.)
- **Orchestral Parts:** Cue notes to other instruments
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Overview

1. Requirements for Professional Music Publishing

2. LilyPond for Music Typesetting
   - Introduction to the LilyPond Syntax
   - Full Scores: Same Structure for all Parts / Movements
   - LilyPond is written in C++ and Guile / Scheme; extensible via Scheme
   - Solution: OrchestralLily (simple example)

3. Structure of a Score

4. OrchestralLily

5. Text parts of Editions: Preface & Cover

6. Templates

7. Availability of OrchestralLily
A Short Introduction to LilyPond

- Text-based input
- processed by LilyPond binary to PDF
- WYSIWYM (What you see is what you mean): You enter the musical content, not the exact layout
- LilyPond is based on engraving conventions for music developed before computers were used to generate ugly scores.

A very simple LilyPond score

```
\version "2.13.17"
\relative c'' { 
c4 \p d8 [( c )] e4 − . d− . | 
c1 \bar "| ." 
}
```

\[ \text{\includegraphics[width=0.5\textwidth]{screenshot.png}} \]
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  c4 \p \d8[ ( c ) ] e4 \-. d\-. |
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```


\relative c {
    \key d \major \time 4/4 \clef "bass"
    d4\p< e8[( d)] fis4\!-. cis'-. |
    d1~\f | d1 \bar ."
}

- **Note names**: c d e f g a b, -is for sharp, -es for flat
- Relative mode: intervals larger than fifth need ', or ', otherwise no modif.
- Durations: 1, 2, 4, 8 for whole, half, quarter, eight; . for dot, e.g. 4.;
  repeated durations not required
- Ties: ~ after duration
- Time signature, key, clef
- Dynamics: \ppp, \\. \fff, \< and \> ... \~ for hairpins
- Slurs: ( and ) after the notes
- Beaming: Automatically; manually with [ and ] after the notes
- Articulations: e.g. -. , ->, \marcato, etc. after the note
- Bar lines: | for single barline (barcheck, not required), \bar "| ." for end,
  \repeat { music } for repeat structure.

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Music Publishing
LilyPond & OrchestralLily
Score Structure
OrchestralLily
Text parts
Templates
Availability

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Slurs: ( and ) after the notes

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Articulations: e.g. -. , ->, \(\text{marcato}\), etc. after the note

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Creating Staves and Staff Groups

\version "2.13.17"

SMusic = \relative c' { 
c4 \p d8[( c )] e4 − d−. |
c1 \bar "|.;"
}
SLyrics = \lyricmode { 
Oh, be _ hap — py now!
}
AMusic = \relative c' { 
g4 f4 e4 f |
e1 \bar "|.;"
}
ALyrics = \lyricmode { 
Oh, be hap — py now!
}

\score { 
\new ChoirStaff << 
\new Staff { 
\new Voice = "Soprano" { 
\dynamicUp \SMusic 
}
}
\new Lyrics = "SLyrics" 
\lyricsto "Soprano" \SLyrics 
\new Staff { 
\new Voice = "Alto" { 
\dynamicUp \AMusic 
}
}
\new Lyrics = "ALyrics" 
\lyricsto "Alto" \ALyrics

}
Music can be assigned to variables!

Score structure is built using
\new (StaffGroup|ChoirStaff|Staff|Lyrics|Voice) ...

A single staff and voice will be implicitly created if some music is given
(useful for simple scores consisting of only one staff)

Delimiter are braces \{ \}, their contents appear sequentially

Parallel contents (e.g. parallel staves) are in << .... >>

Problems with large works (many instruments and movements)

Each movement has the same structure (some instruments might be missing),
only the variable names will be different.
E.g. Opus with 23 instruments, 12 movements: 276 individual staves (excluding
groups), same number of staves in instrumental parts, etc.
Each full score has exactly the same structure!
Image: You want to change the instrument order (because your publisher wants
that)...

Why not automate it?!?!?
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Each full score has exactly the same structure!
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Why not automate it?!?!?
LilyPond uses Guile (Scheme dialect) as scripting language.

```lilypond
\version "2.13.18"
%LSR contributed by Jay Anderson.

#(define (octave-up m t)
  (let* ((octave (1- t))
    (note (ly:music:deep-copy m))
    (orig-pitch (ly:music:property m 'pitch))
    (pitch (ly:make-pitch octave
       (ly:pitch:notename orig-pitch)
       (ly:pitch:alteration orig-pitch))))
  (set! (ly:music:property note 'pitch)
pitch)
note))

#(define oct-chord elements t)
  (cond ((null? elements) elements)
    ((eq? (ly:music:property (car elements) 'name) 'NoteEvent)
     (cons (car elements)
       (cons (octave-up (car elements) t)
         (oct-chord (cadr elements) t))))
    (else (cons (car elements)
       (cons (octave-up (car elements) t)
         (oct-chord (cadr elements) t))))))

#(define (octavize music t)
  (if (eq? (ly:music:property music 'name) 'EventChord)
    (ly:music:set-property! music 'elements (oct-chord (ly:music:property music 'elements) t)))
  music)

makeOctaves = #(define/music/function
   (parser location arg mus) (integer? (ly:music?)
     (music-map (lambda (x) (octavize x arg))
       mus)))

\relative c' {
  \time 3/8
  \key g\is\ minor
  \makeOctaves #1 { dis8 ( e dis ') ~ dis8 .
    cis16 b8}
  \makeOctaves #−1 { ais' gis dis) cis( dis
    <dis gis'>) }
}
OrchestralLily: An easy example

The original example with plain LilyPond

\version "2.13.17"

SMusic = \relative c' { 
  c4 \p d8[ ( c )] e4 \- . d \- . | 
  c1 \bar "|:"
}

SLyrics = \lyricmode { 
  Oh, be \_ \_ hap \_\_ py now!
}

AMusic = \relative c' { 
  g4 f4 e4 f | 
  e1 \bar "|:"
}

ALyrics = \lyricmode { 
  Oh, be hap \_\_ py now!
}
The original example with OrchestralLily: much less code!

\version "2.13.17"
\include "orchestrallily/orchestrallily.ily"
\createScore #"" #"("Ch")

SMusic = \relative c' { 
c4 \p d8[( c)] e4 -- d-- |
c1 \bar "|." 
}
SLyrics = \lyricmode {
Oh, be __ hap — py now!
}
AMusic = \relative c' { 
g4 f4 e4 f |
e1 \bar "|." 
}
ALyrics = \lyricmode {
Oh, be hap — py now!
}

\include "orchestrallily/orchestrallily.ily"
\createScore #"" #"("Ch")

Oh, be hap — py now!

Oh, be hap — py now!
Creating score for Movement for given instrument(s) or group(s) (see below)

\createScore #'("Movement" "or" "Groups")

OrchestralLily takes all score information from appropriately named variables:

Form of the variables used by OrchestralLily

[Movement][Instrument]Identifier

The (optional) Movement and Instrument (or Group) can be chosen arbitrarily, but need to coincide with the ones given in the \createScore command. Identifier can be any of the list on the next slide.

Examples:
- CadenzaSMusic ... Music for Soprano, piece "Cadenza"
- CadenzaSLyrics ... Music for Soprano, piece "Cadenza"
- CadenzaIIKey ... Key for "CadenzaII" for all instruments and groups
- VaClef ... Clef for Viola for all pieces

More specific settings override (e.g. CadenzaSKey overrides CadenzaKey)
Variable names in use by OrchestralLily

Creating score for Movement for given instrument(s) or group(s) (see below)

\createScore #'"Movement" #'"("Instruments" "or" "Groups")

OrchestralLily takes all score information from appropriately named variables:

Form of the variables used by OrchestralLily

\[ [\text{Movement}] [\text{Instrument}] \text{Identifier} \]

The (optional) Movement and Instrument (or Group) can be chosen arbitrarily, but need to coincide with the ones given in the \createScore command. \text{Identifier} can be any of the list on the next slide.

Examples:

- CadenzaSMusic ... Music for Soprano, piece "Cadenza"
- CadenzaSLyrics ... Music for Soprano, piece "Cadenza"
- CadenzaIIKey ... Key for "CadenzaII" for all instruments and groups
- VaClef ... Clef for Viola for all pieces

More specific settings override (e.g. CadenzaSKey overrides CadenzaKey)
Variable names in use by OrchestralLily

Creating score for Movement for given instrument(s) or group(s) (see below)

```latex
\texttt{\textbackslash createScore \#"Movement" #'("Instruments" "or" "Groups")}
```

OrchestralLily takes all score information from appropriately named variables:

Form of the variables used by OrchestralLily

```
\[ \text{[Movement] [Instrument] Identifier} \]
```

The (optional) Movement and Instrument (or Group) can be chosen arbitrarily, but need to coincide with the ones given in the `\texttt{\textbackslash createScore}` command. *Identifier* can be any of the list on the next slide.

Examples:

- CadenzaSMusic ... Music for Soprano, piece "Cadenza"
- CadenzaSLyrics ... Music for Soprano, piece "Cadenza"
- CadenzaIIKey ... Key for "CadenzaII" for all instruments and groups
- VaClef ... Clef for Viola for all pieces

More specific settings override (e.g. CadenzaSKey overrides CadenzaKey)
Variable names in use by OrchestralLily

Creating score for Movement for given instrument(s) or group(s) (see below)

```
\createScore #"Movement" #'("Instruments" "or" "Groups")
```

OrchestralLily takes all score information from appropriately named variables:

Form of the variables used by OrchestralLily

```
[Movement][Instrument]Identifier
```

The (optional) Movement and Instrument (or Group) can be chosen arbitrarily, but need to coincide with the ones given in the \createScore command. Identifier can be any of the list on the next slide.

Examples:

- CadenzaSMusic ... Music for Soprano, piece "Cadenza"
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More specific settings override (e.g. CadenzaSKey overrides CadenzaKey)
### All variable name modifies used by OrchestralLily

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description</th>
</tr>
</thead>
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<td>Containing the music expression of the voice</td>
</tr>
<tr>
<td>Lyrics(</td>
<td>I</td>
</tr>
<tr>
<td>Clef ...</td>
<td>Clef for (movement+)instrument</td>
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<tr>
<td>Key ...</td>
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<td>More settings for movement+instrument</td>
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<td>PieceName ...</td>
<td>Displayed movement title</td>
</tr>
<tr>
<td>PieceNameTacet ...</td>
<td>Displayed movement title for quiet instruments</td>
</tr>
<tr>
<td>Transpose(From</td>
<td>To) ...</td>
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<tr>
<td>Voice ...</td>
<td>Explicit voice (override automatic generation)</td>
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<td>Explicit staff (override automatic generation)</td>
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<tr>
<td>(Staff</td>
<td>Lyrics</td>
</tr>
<tr>
<td>InstrumentName ...</td>
<td>Displayed instrument name (begin of score)</td>
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<tr>
<td>ShortInstrumentName ...</td>
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<tr>
<td>MidiInstrument ...</td>
<td>Instrument for MIDI generation</td>
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</tbody>
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Overview

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   - Instrumental Staff Groupups (Pre-Defined Order)

4. OrchestralLily

5. Text parts of Editions: Preface & Cover

6. Templates

7. Availability of OrchestralLily
Score Structure (Inherent Hierarchy of Orchestral Scores)

- Each instrument is named using its standard abbreviation (VI, VII, Va, Vc, FagI, FagII, ObI, ObII, S, A, T, B, O, etc.)
- Each group of identical instruments (e.g. Violins, flutes, oboes, etc.) also use their standard abbreviation (V, Fl, Ob, etc.); sharing same staff or curly braces for grouping
- Groups of instruments: Wd (Woodwinds), Br (Brass), Str (Strings, except cellos/basses), Solo (all vocal soloists), Choir (S, A, T, B), Vocal (Solo + Choir); square brackets for grouping (except soloists no visible bracket)
- Several score types:
  - FullScore (same instruments share a staff),
  - LongScore (two staves for identical instruments)
  - VocalScore (Solo+Choir, Piano reduction "P")
  - ChoralScore (only vocal voices, no accompaniment)
  - etc.
- Each **instrument** is named using its standard abbreviation (**VI, VII, Va, Vc, FagI, FagII, ObI, ObII, S, A, T, B, O**, etc.)
- Each group of **identical instruments** (e.g. Violins, flutes, oboes, etc.) also use their standard abbreviation (**V, Fl, Ob**, etc.); sharing same staff or curly braces for grouping
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Overview

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   - Full Score
   - Instrumental parts
     - Cue Notes
     - Transposition
   - Vocal Score
     - Modifying Individual Staves
   - Special Types of Staves (Figured Bass, Drum, Tablature)

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6. Templates

Availability of OrchestralLily

Score Structure

OrchestralLily

Text parts

Templates

Text parts

Score Structure

OrchestralLily

Text parts

Templates

Availability
Music definitions in the file "music-definitions.ily"

```
\include "orchestrallily/orchestrallily.ily"
\include "orchestrallily/oly_settings_names.ily"

header {
  title = "A cadenza"
}
CadenzaPieceNameTacet = "Cadenza tacet"

% Flute and Violin:
CadenzaFIMusic = \relative c' { e4 a g b, | c1 \bar "|." }
CadenzaVIMusic = \relative c' {
  c16[ e g e ] d[ f a f ] e[ g e c ] b[ d b g ] | c1 \bar "|." }

% The vocal voices:
CadenzaSMusic = \relative c' {
  c4\p d8[(( c )] e4--. d--. | c1 \bar "|." }
CadenzaSLyrics = \lyricmode {
  Oh, be -- hap — py now! }
CadenzaAMusic = \relative c' {
  g4 f4 e4 f | e1 \bar "|." }
CadenzaALyrics = \lyricmode {
  Oh, be hap — py now! }

% Continuo: Organ / Celii / Bassi / Bassoon
CadenzaBCMusic = \relative c { c4 f4 g g, | c1 \bar "|." }
CadenzaFiguredBassMusic = \figuremode {
  s4 <6>8 <5> <6 4>4 <5 3> | s1
}
```

- **External include file**
- Contains all music and lyrics definitions
- All variables start with "Cadenza"
- Defines a global work title
- Defines a tacet title
The sample music

Music definitions in the file "music-definitions.ily"

```lilypond
\include "orchestralily/orchestralily.ily"
\include "orchestralily/oly_settings_names.ily"

\header {
  title = "A cadenza"
}
CadenzaPieceNameTacet = "Cadenza tacet"

% Flute and Violin:
CadenzaFlMusic = \relative c' { e4 a g b, | c1 \bar "|." }  
CadenzaVIMusic = \relative c' {  
c16[ e g e ] d[ f a f ] e[ g e c ] b[ d b g ] |  
c1 \bar "|." }

% The vocal voices:
CadenzaSMusic = \relative c' {  
c4\p d8[( c )] e4--. d--. | c1 \bar "|." }  
CadenzaSLyrics = \lyricmode {  
  Oh, be -- hap — py now! }  
CadenzaAMusic = \relative c' {  
g4 f4 e4 f | e1 \bar "|." }  
CadenzaALyrics = \lyricmode {  
  Oh, be hap — py now! }

% Continuo: Organ / Celli / Bassi / Bassoon
CadenzaBCMusic = \relative c { c4 f4 g g, | c1 \bar "|." }  
CadenzaFiguredBassMusic = \figuremode {  
s4 <6>8 <5> <6 4>4 <5 3> | s1
```

- External include file
- Contains all music and lyrics definitions
- All variables start with "Cadenza"
- Defines a global work title
- Defines a tacet title
Music definitions in the file "music-definitions.ily"

```lilypond
\include "orchestrallily/orchestrallily.ily"
\include "orchestrallily/oly_settings_names.ily"

\header {
    title = "A cadenza"
}
CadenzaPieceNameTacet = "Cadenza tacet"

% Flute and Violin:
CadenzaFlIMusic = \relative c'' { e4 a g b, | c1 \bar "." }
CadenzaVIMusic = \relative c'' {
    c16[ e g e] d[ f a f] e[ g e c] b[ d b g] |
    c1 \bar "."
}

% The vocal voices:
CadenzaSMusic = \relative c'' {
    c4\p d8[( c)] e4 \-- d\-- | c1 \bar "." }
CadenzaSLyrics = \lyricmode {
    Oh, be \_\_ hap \_\_ py now! }
CadenzaAMusic = \relative c'' {
    g4 f4 e4 f | e1 \bar "." }
CadenzaALyrics = \lyricmode {
    Oh, be hap \_\_ py now! }

% Continuo: Organ / Celli / Bassi / Bassoon
CadenzaBCMusic = \relative c { c4 f4 g g, | c1 \bar "." }
CadenzaFiguredBassMusic = \figuremode {
    s4 <6>8 <5> <6 4>4 <5 3> | s1
}
```

- External include file
- Contains all music and lyrics definitions
- All variables start with "Cadenza"
- Defines a global work title
- Defines a tacet title
Music definitions in the file "music-definitions.ily"

```lilypond
\include "orchestrallily/orchestrallily.ily"
\include "orchestrallily/oly_settings_names.ily"

\header {
    title = "A cadenza"
}
CadenzaPieceNameTacet = "Cadenza tacet"

% Flute and Violin:
CadenzaFFIMusic = \relative c' { e4 a g b, | c1 \bar "." }
CadenzaFIMusic = \relative c' { c16 [ e g e ] d [ f a f ] e [ g e c ] b [ d b g ] | c1 \bar "." }

% The vocal voices:
CadenzaSMusic = \relative c' { c4 \p d8 [ (e c) ] e4--. d-- | c1 \bar "." }
CadenzaSLyrics = \lyricmode { Oh, be _- hap — py now! }
CadenzaAMusic = \relative c' { g4 f4 e4 f | e1 \bar "." }
CadenzaALyrics = \lyricmode { Oh, be hap — py now! }

% Continuo: Organ / Celli / Bassi / Bassoon
CadenzaBCMusic = \relative c { c4 f4 g g, | c1 \bar "." }
CadenzaFiguredBassMusic = \figuremode { s4 <6>8 <5> <6 4>4 <5 3> | s1 }
```

- External include file
- Contains all music and lyrics definitions
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% Flute and Violin:
CadenzaFlIMusic = \relative c' { e4 a g b, | c1 \bar "|." }
CadenzaVIMusic = \relative c' { c16 [ e g e] d[ f a f] e[ g e c] b[ d b g] | c1 \bar "|." }

% The vocal voices:
CadenzaSMusic = \relative c' { c4\p d8 (\c) e4-- d-- . c1 \bar "|." }
CadenzaSLyrics = \lyricmode { Oh, be -- hap — py now! }
CadenzaAMusic = \relative c' { g4 f4 e4 f | e1 \bar "|." }
CadenzaALyrics = \lyricmode { Oh, be hap — py now! }

% Continuo: Organ / Celli / Bassi / Bassoon
CadenzaBCMusic = \relative c { c4 f4 g g, | c1 \bar "|." }
CadenzaFiguredBassMusic = \figuremode {
  s4 <6\>8 <5\> <6\>4 <5\>3 | s1}
The Full Score

```lilypond
\version "2.13.17"
\include "orchestralily/oly_settings_fullscore.ily"
\include "music-definitions.ily"
\setCreateMIDI ##t
\setCreatePDF ##t
\createScore "Cadenza" ("FullScore")
```

A cadenza

- Flauti
- Violino I
- Soprano
- Alto
- Organo

- Compilable LilyPond file (See compilation)
- Includes our "music-definitions.ily"
- Generate score for "FullScore"
- Create MIDI and PDF output (Listen!)
- OrchestralLily knows e.g. bass clef for the continuo (overriding is possible). Also e.g. C-clef for Viola or Trombone
The Full Score

\version "2.13.17"
\include "orchestralily/oly_settings_fullscore.ily"
\include "music-definitions.ily"
\set CreateMIDI ##t
\set CreatePDF ##t
\createScore #"Cadenza" #'("FullScore")

A cadenza

Flauti

Violino I

Soprano

Oh, be happy now!

Alto

Oh, be happy now!

Organo

- Compilable LilyPond file (See compilation)
- Includes our "music-definitions.ily"
- Generate score for "FullScore"
- Create MIDI and PDF output (Listen!)
- OrchestralLily knows e.g. bass clef for the continuo (overriding is possible). Also e.g. C-clef for Viola or Trombone
The Full Score

Compilable LilyPond file (See compilation)

Includes our "music-definitions.ily"

Generate score for "FullScore"

Create MIDI and PDF output (Listen!)

OrchestralLily knows e.g. bass clef for the continuo (overriding is possible). Also e.g. C-clef for Viola or Trombone
The Full Score

Compilable LilyPond file (See compilation)
- Includes our “music-definitions.ily”
- Generate score for ”FullScore”
- Create MIDI and PDF output (Listen!)

OrchestralLily knows e.g. bass clef for the continuo (overriding is possible). Also e.g. C-clef for Viola or Trombone
The Full Score

Version "2.13.17"
\include "orchestralily/oly_settings_fullscore.ily"
\include "music-definitions.ily"
\setCreateMIDI ##t
\setCreatePDF ##t
\createScore="#"Cadenza"="#"FullScore"")

A cadenza

Flauti

Violino I

Soprano

Oh, be happy now!

Alto

Oh, be happy now!

Organo

\include "orchestralily/oly_settings_fullscore.ily"
\include "music-definitions.ily"
\setCreateMIDI ##t
\setCreatePDF ##t
\createScore="#"Cadenza"="#"FullScore"")

- Compilable LilyPond file (See compilation)
- Includes our "music-definitions.ily"
- Generate score for "FullScore"
- Create MIDI and PDF output (Listen!)
- OrchestralLily knows e.g. bass clef for the continuo (overriding is possible). Also e.g. C-clef for Viola or Trombone
Generating Instrumental parts

Same method to generate individual instrumental part than full score

If no music is defined for a desired instrument, a "Tacet" header is printed

\version "2.13.17"
\include "music-definitions.ily"
\include "orchestralily/oly_settings_instrument.ily"
\header { instrument = \VIIInstrumentName }
\createScore #"Cadenza" #'("VI")

A cadenza  

\version "2.13.17"
\include "music-definitions.ily"
\header { instrument = \OblInstrumentName }
\createScore #"Cadenza" #'("Obl")

A cadenza

If no music is defined for a desired instrument, a "Tacet" header is printed

Cadenza tacet
Generating Instrumental parts

- Same method to generate individual instrumental part than full score
- "instrument" name header field used

If no music is defined for a desired instrument, a "Tacet" header is printed
Generating Instrumental parts

```
\version "2.13.17"
\include "music-definitions.ily"
\include "orchestraLily/oly_settings_instrument.ily"
\header { instrument = \VIIInstrumentName }
\createScore #"Cadenza" #'("VI")
```

- A cadenza

Violino I

- Same method to generate individual instrumental part than full score
- "instrument" name header field used

If no music is defined for a desired instrument, a "Tacet" header is printed

```
\version "2.13.17"
\include "music-definitions.ily"
\header { instrument = \ObIInstrumentName }
\createScore #"Cadenza" #'("ObI")
```

- A cadenza

Oboe I

Cadenza tacet
Working with cue notes: Visible in part, hidden in full score

- Quotable music defined with `\addQuote` (name assigned)
- Cue notes added directly in Flute 2 part
- Using `\cueDuring` or `\namedCueDuring` for instrument names

Instrumental part displays cue notes

\addQuote #$"Flute1" \CadenzaFlIIIMusic

\begin{verbatim}
CadenzaFlIIIMusic = \relative c' { 
  \namedCueDuring #$"Flute1" #UP "$Fl.1" 
  "Fl.2" \{ R1 \} | 
  g1 \bar "|:"
}\end{verbatim}

\version "2.13.17"
\include "music-definitions.ily"
\include "music-definitions--flute2.ily"

% The Flute 2 part:
\createScore #$"Cadenza" #$"("Fl.II")

A cadenza
Working with cue notes: Visible in part, hidden in full score

- Quotable music defined with `\addQuote` (name assigned)
- Cue notes added directly in Flute 2 part
  - Using `\cueDuring` or `\namedCueDuring` for instrument names
- Instrumental part displays cue notes

```
\addQuote "Flute1" \CadenzaFlIIIMusic

CadenzaFlIIIMusic = \relative c' { \namedCueDuring "Flute1" \UP "Fl.1" "Fl.2" { R1 } | g1 \bar "." }
```

```
\version "2.13.17"
\include "music-definitions.ily"
\include "music-definitions-flute2.ily"

% The Flute 2 part:
\createScore "Cadenza" #'("FlI"")
```

A cadenza

Flauto II: Fl.1 Fl.2
Working with cue notes: Visible in part, hidden in full score

- Quotable music defined with `\addQuote` (name assigned)
- Cue notes added directly in Flute 2 part
- Using `\cueDuring` or `\namedCueDuring` for instrument names

```
\addQuote #'"Flute1" ' \CadenzaFlIIIMusic

CadenzaFlIIIMusic = \relative c'' { \namedCueDuring #'"Flute1" #UP "Fl.1" "Fl.2" \{ R1 \} | g1 \bar "$" }
```

```
\version "2.13.17"
\include "music-definitions.ily"
\include "music-definitions-flute2.ily"

% The Flute 2 part:
\createScore #'"Cadenza" #'("Fl.1")
```

A cadenza

```
\Fluut II: Fl.1 \down e \up c \down \up \down \up \up 
\Fl.2
```
Working with cue notes: Visible in part, hidden in full score

\addQuote \"Flute1\" \CadenzaFlII\Music

\CadenzaFlII\Music = \relative c' \{
\namedCueDuring \"Flute1\" \UP \"Fl.1\" \"Fl.2\" \{ R1 \} |
g1 \bar ":."
\}

\version "2.13.17"
\include "music-definitions.ily"
\include "music-definitions-flute2.ily"

% The Flute 2 part:
\createScore \"Cadenza\" \#'\("FlIII\")

- Quotable music defined with \addQuote (name assigned)
- Cue notes added directly in Flute 2 part
- Using \cueDuring or \namedCueDuring for instrument names

- Instrumental part displays cue notes

A cadenza

\begin{music}
\relative c' { 
\flautoII\bar { \note e'4 \fl.1 } \note d'4 \note c'4 |
\note \fl.2 \rest |
}\end{music}
% remove the cues in Flute 2:
\createNoCuesScore "Cadenza" #'("FlLong")

A cadenza

- Full scores or combined flute parts should not show cue notes
- Use \createNoCuesScore instead of \createScore
Full scores or combined flute parts should not show cue notes

- Use `\createNoCuesScore` instead of `\createScore`
Transposing parts / Transposing instruments

- Transposing a whole piece (e.g. Schubert song for bass/alto voice)
- Transposing instrument (sounding pitch different from written pitch); e.g. Clarinets in B flat, E flat; Horn in D; etc.

```lily
\version "2.13.17"
\include "music−definitions.ily"

% We need to give the key explicitly, so that it will also be transposed:
CadenzaVIKey = \key c \major
% Transpose to g major
CadenzaVITransposeFrom = g

\createScore #'"Cadenza" #'"VI"
```

A cadenza

Violino I

- TransposeFrom and TransposeTo
- If not given, c is assumed
- Key should always be explicitly given (otherwise default will be C major for transposed(!) output)
Transposing parts / Transposing instruments

- Transposing a whole piece (e.g. Schubert song for bass/alto voice)
- Transposing instrument (sounding pitch different from written pitch); e.g. Clarinets in B flat, E flat; Horn in D; etc.

```lily
\version "2.13.17"
\include "music-definitions.ily"

% We need to give the key explicitly, % so that it will also be transposed:
CadenzaVIKey = \key c \major
% Transpose to g major
CadenzaVITransposeFrom = g

\createScore #"Cadenza" #'("VI")
```

A cadenza

Violino I

- TransposeFrom and TransposeTo
- If not given, c is assumed
- Key should always be explicitly given (otherwise default will be C major for transposed(!) output)
Transposing parts / Transposing instruments

- Transposing a whole piece (e.g. Schubert song for bass/alto voice)
- Transposing instrument (sounding pitch different from written pitch); e.g. Clarinets in B flat, E flat; Horn in D; etc.

```lilypond
\version "2.13.17"
\include "music-definitions.ily"

% We need to give the key explicitly, so that it will also be transposed:
CadenzaVIKey = \key c \major
% Transpose to g major
CadenzaVITransposeFrom = g

\createScore #'"Cadenza" #'("VI")
```

A cadenza

Violino I

- TransposeFrom and TransposeTo
- If not given, c is assumed
- Key should always be explicitly given (otherwise default will be C major for transposed(!) output)
Transposing parts / Transposing instruments

- Transposing a whole piece (e.g. Schubert song for bass/alto voice)
- Transposing instrument (sounding pitch different from written pitch); e.g. Clarinets in B flat, E flat; Horn in D; etc.

```ruby
\version "2.13.17"
\include "music-definitions.ily"

% We need to give the key explicitly, % so that it will also be transposed:
CadenzaVIKey = \key c \major
% Transpose to g major
CadenzaVITransposeFrom = g

\createScore #'"Cadenza" #'"VI"
```

A cadenza

Violino I

- TransposeFrom and TransposeTo
- If not given, c is assumed
- Key should always be explicitly given (otherwise default will be C major for transposed(!) output)
Vocal Score: Choir and Piano Reduction

Piano reduction defined like any other music

"PI" (right hand) and "PII" (left hand) as names

\twoVoice {...} {...} used for temporary voice splitting (stemp up/down)

Very short!
Vocal Score: Choir and Piano Reduction

- Piano reduction defined like any other music
- "PI" (right hand) and "PII" (left hand) as names
- `\twoVoice { ... } { ... }` used for temporary voice splitting (stemp up/down)

```
\version "2.13.17"
\include "music-definitions.ily"
\createScore #'("Cadenza" #'("VocalScore")

CadenzaPIIMusic = \relative c' { 
  \twoVoice { 
    c16[ e g e] d[ f a f] e[ g e c] b[ d b g] | 
    e4 a <g c>4 <b f>4 
  } | \% 2 
  <c g e>1 \bar "|." 
}
CadenzaPIIIMusic = \relative c { 
  <c g'>4 f <g c>4 <g d'> | \% 2 
  <c c,>1 \bar "|." 
}
```

```
Oh, be happy now!
```

Very short!
Vocal Score: Choir and Piano Reduction

Piano reduction defined like any other music

"PI" (right hand) and "PII" (left hand) as names

\twoVoice {...} {...} used for temporary voice splitting (stem up/down)

Very short!
Modifying Individual Staves and Voices

Suppose we now want to modify the vocal score so that:

- vocal staves are smaller
- Soprano noteheads colored red
- Alto lyrics printed italic

```\version "2.13.17"
\include "music–definitions.ily"

CadenzaSStaffModifications = \with { 
  fontSize = #-3 
  \override StaffSymbol #'staff–space = #(magstep -3) 
}
CadenzaAStaffModifications = \CadenzaSStaffModifications
CadenzaChStaffModifications = \CadenzaSStaffModifications
CadenzaALyricsModifications = \with { 
  \override LyricText #'font–shape = #italic 
}
CadenzaSVoiceModifications = \with { 
  \override NoteHead #'color = #red 
}
\createScore #"Cadenza" #'("VocalScore")
```

- All modifications only in
  *StaffModifications,
  *VoiceModifications and
  *LyricsModifications
  variables
Modifying Individual Staves and Voices

Suppose we now want to modify the vocal score so that:

- vocal staves are smaller
- Soprano noteheads colored red
- Alto lyrics printed italic

\version "2.13.17"
\include "music−definitions.ily"

CadenzaSSStaffModifications = \with {
  fontSize = −3
  \override StaffSymbol #'staff−space = 
    #(magstep −3)
}
CadenzaAStaffModifications = \CadenzaSSStaffModifications
CadenzaChStaffModifications = \CadenzaSSStaffModifications
CadenzaALyricsModifications = \with {
  \override LyricText #'font−shape = 
    #'italic 
}
CadenzaSVoiceModifications = \with {
  \override NoteHead #'color = #red
}
\createScore #"Cadenza" #'("VocalScore")

- All modifications only in *StaffModifications, *VoiceModifications and *LyricsModifications variables
Figured bass

\version "2.13.17"
\include "music-definition.ily"

CadenzaFiguredBassMusic = \figuremode { 
  s4 \<6\>8 \<5\> \<6\>4 \<5\>3 \s1
}\createScore #"Cadenza" #'("Continuo")

A cadenza

\begin{music}
\f clef=percussion
\f \time 4 4
\f [1] 6 5 6 \\
\f \phantom{5} 4 \\
\f \phantom{5} 3 \\
\f \end{music}

- Figured bass is entered as *FiguredBassMusic*
- Figures placed inside \figuremode as <nr>.
- Automatically used by the "Continuo" instrument group (and similar)
Drum and Tab staves

\version "2.13.17"
\include "orchestrallily/orchestrallily.ily"

\header { 
  title = "Drum and tab staves" 
  composer = "Anonymous"
}

\set Staff dramILMusic = \drummode { 
  crashcymbal4 hihat8 halfopenhihat
} 
\set Staff dramILMusic = { 
  c4 c4
} 
\set Staff tabularMusic = { 
  c4 <e g>8 d16 r16
}

\set Staff orchestralScoreStructure #'[ 
  ("dramIL" "DrumStaff" ( )) 
  ("dramIL" "RhythmicStaff" ( )) 
  ("tabular" "TabStaff" ( ))
]
\set Staff orchestralVoiceTypes #'[ 
  ("dramIL" "DrumVoice") 
  ("tabular" "TabVoice")
]
\set Staff createScore #"Cadenza" #'("dramIL" "dramIL" "tabular")

OrchestralLily can be extended to other staff types
Drum-/TabStaff already pre-defined
## Overview

1. Requirements for Professional Music Publishing
2. LilyPond for Music Typesetting
3. Structure of a Score
4. OrchestralLily
5. **Text parts of Editions: Preface & Cover**
6. Templates
7. Availability of OrchestralLily
- Written in plain \LaTeX, using the editionkainhofer.sty package.
- Macros for nice title page (colored background) and paper size (both depending on score type).
- PDF of LilyPond score included via pdfpages package.
- Table of contents also includes the movements of the score (automatically generated by OrchestralLily!)
Written in plain LaTeX, using the editionkainhofer.sty package.

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• Written in plain LaTeX, using the editionkainhofer.sty package.
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**Hauptquellen der Bearbeitung / Main sources of this edition**

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Templates: Generating file and directory hierarchy for a complete edition

- Music definitions for each movement have the same structure
- Each score file also has the exact same structure

⇒ Collect all information about score in one file, generate all input files (Makefile, music definitions, LaTeX, etc.) automatically with `orchestrallily/generate_oly_score.py`!

```json
{
    "output_dir": "Cadenza",
    "version": "2.13.11",
    "template": "EK.Full",

    "defaults": {
        "title": "A test for OrchestralLily",
        "composer": "Reinhold Kainhofer",
        "composerdate": "1977—",

        "year": "2009",
        "publisher": "Edition Kainhofer",
        "scorenumber": "EK−1040",
        "basename": "Cadenza",
        "parts": [
            {
                "id": "Cadenza",
                "piece": "A cadenza",
                "piacet": "Cadenza tacet"
            }
        ],

        "instruments": ["FlI", "VI", "S", "A", "Continuo"],
        "vocalvoices": ["S", "A"],
        "scores": ["Full", "Vocal", "Choral"],

        "scores": ["Cadenza"],
        "latex": {}
    },

    "scores": ["Cadenza"],
    "latex": {}
}
```

Resulting file structure:
```
./Cadenza/
    __orchestrallily/
    ____Makefile
    ____Cadenza_Music_Cadenza.ily
    ____Cadenza_Score_Chalor.ily
    ____Cadenza_Score_Full.ily
    ____Cadenza_Score_Vocal.ily
    ____Cadenza_Instrument.S.ily
    ___...
    ____Cadenza_Settings_Global.ily
    ____Cadenza_Settings.ily
    ____Cadenza_Settings_Score.ily
    ___...
    ____TeX_Cadenza_Include_Bio.itex
    ____TeX_Cadenza_Include_Coverpage.itex
    ____TeX_Cadenza_Include_KritBericht.itex
    ___...
    ____TeX_Cadenza_Score_Full.tex
    ____TeX_Cadenza_Score_Vocal.tex
    ___...
    ____TeX_Cadenza_Settings.itex
```
Music definitions for each movement have the same structure
Each score file also has the exact same structure

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```json
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  __Cadenza_Settings.ily  
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  ...  
  __TeX_Cadenza_Include_Bio.itex  
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  ...  
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Availability of OrchestralLily

OrchestralLily on the Web: Source code and Homepage

- Git repository (source code):
  http://repo.or.cz/w/orchestrallily.git
- Homepage: http://reinhold.kainhofer.com/orchestrallily/

License: Dual-licensed under CC BY-NC 3.0 and GPL v3.0

- Creative Commons: Attribution Non-commercial (BY-NC) 3.0 license
- GNU Public License: GPL v3.0

Acknowledgements

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