# Heqet Tutorial

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## 1 Heqet for Euterpea Users

Given a Euterpea music expression, creating a score is straightforward. You will need to import Heqet and Heqet.Input.Euterpea and then apply the following functions: First, to convert it to a Heqet music value, you should use fromEu or fromEu1, which take a Euterpea Music Pitch or a Music Note1 respectively. Now you can print a score to stdout with the functions quickScore or quickLine. quickScore produces a piano rendition, while quickLine writes a single staff.

The reason that these functions perform IO is that the simplest way to use Heqet here is to write a Haskell program which outputs your Lilypond code and pipe it directly into Lilypond, which you can do by running the included heqet.sh bash script with your Haskell program filename as an argument. Alternatively, just load your program into GHCi and paste the output code into a Lilypond file.

Now, suppose you have a score that has multiple instruments and you want to write them on separate staves with appropriate labels. If your Euterpea doesn't have instrument modifiers, you'll have to assign instruments in Heget.

### 2 Heget for Lilypond Users

#### 2.1 Note input

#### 2.2 Differences from Lilypond input

There are several differences between the Heqet note-input domain-specific language and Lilypond input, for a variety of reasons.

- You can enter notes with any rational duration with the \d syntax, for example c\d 4/5 to make a note with a duration of 4/5 of a WHAT. You can omit the denominator if it's 1. This is currently the only way to enter notes of the durations needed for a tuplet.
- hz
- c-( for slurs (sorry)
- no clefs or time signatures
- functions, commands, \with . Lilypond parsing problems
- only absolute entry at the moment.
- percussion notation \phh for hi-hat. When you enter notes, you don't need
  to specify that they must be rendered in a DrumStaff. They should be
  automatically rendered well, although support for percussion is currently
  minimal.
- no way to manually write beams, as this is not something the musician should need to worry about.

- 2.3 Making a score
- 2.4 Lilypond tweaks
- 3 Advanced topics