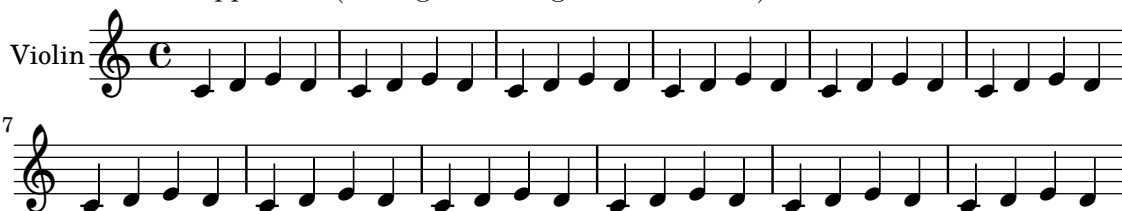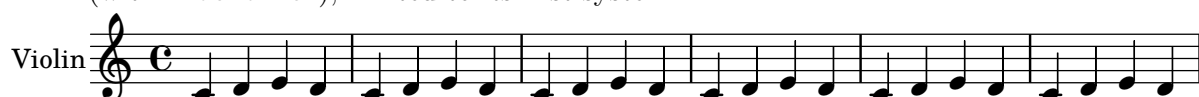# Dynamic Indent

This document demonstrates the use of `indent` and `autoindent`, partially in combination with `print-only`.

`indent=1cm` indents the first line, but if the resulting score contains only one system this indent is suppressed (issuing a warning on the console):



If the output of a score which contains more than one system is limited to the first system using `print-only=1` then the indent is removed but the score is recompiled to ensure a full-length system. The following score shows the two-system score from above (with `indent=1cm`), limited to its first system:



Note that this behaviour also applies when `print-only` causes the first system to be printed at another position, e.g. with `print-only=3,1,2`. In this case the indent of the first system is suppressed in order to avoid a "hole". Of course this is a corner case, but might be useful when a score consists of separate entities (examples, exercises) per system.
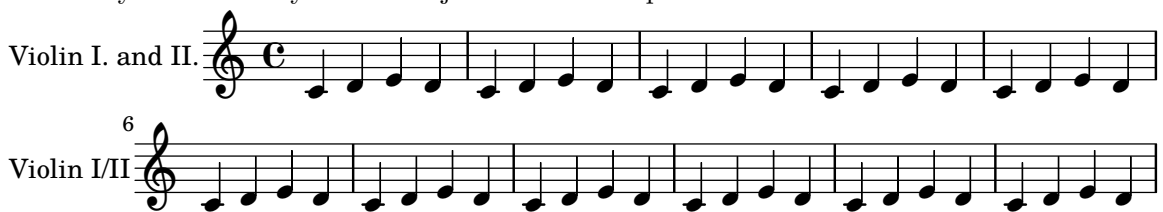


If a protrusion limit has been set with `max-protrusion=0.5cm` and the score exceeds that limit in spite of `indent=1cm` then the whole score will appropriately be narrowed:

This doesn't really look good because the indentation of the second system wouldn't have been necessary since only the first system exceeds the protrusion limit. The solution to this situation is the option `autoindent` which handles the indentation *automatically* and set the indent to a value that will make the *first* system fit into the protrusion limit and leave the remaining systems unchanged:



However, if the protrusion limit is not only exceeded by the *first* system (which should be the typical case due to the instrument name) `lyluatex` will deal with the situation by narrowing the *whole* score by the appropriate amount and adjusting the indent of the first system so all systems will just fit into the protrusion limit:



There is one special case to be mentioned. As described above the indent is deactivated if the first system of a score is printed at a later position. However, if this score will exceed the left protrusion limit `autoindent` will be automatically activated to avoid having the *whole* score narrowed:

**Right protrusion**   The dynamic handling of (automatic) indent also works correctly when there is protrusion handling to the right. The following score has the ties manually shaped to exceed the staff symbol by 10, and 7 staff spaces, and `max-protrusion=1cm` .



**Performance considerations**   The handling of indent suppression may require up to four compilations of the score, but these are handled automatically, and the resulting intermediate stages of the score are cached just like the scores actually used in the document.

The `autoindent` option is active by default but will be deactivated if `indent` is set explicitly. It has to be noted that this option will add more LilyPond compilations and therefore compilation time. But it will only apply and be executed if the score exceeds the protrusion limit, so it can only occur in circumstances where multiple LilyPond runs are expected anyway.