

# Evaluation in Traditional REPLs

```
>>> sum(8./x/(x+2) for x in range(1,10000,4))  
3.141392653591789
```



Python's REPL (read-eval-print-loop) lets us play with our code interactively to verify our mental model of it.

## Evaluation in Lamdu / Live Debugging

- Shows results for *all* subexpressions
- Code is evaluated while being typed
- Browse between different invocations of the same function

Annotations Evaluation Theme light

```
>>> sum map 1 .. 10000  
      step 4  
      [1, ...]  
mapping x → 8 / x / (x + 2)  
        1    8    3  
        ◀ ▶ 2.6666666666666665  
[2.6666666666666665, ...]  
3.141392653591789
```



# FAQ - Continuous Evaluation

**Q:** How do we prevent unsafe code execution?  
When code buys and sells stocks or launches rockets, should such code be automatically executed?

**A:**

Lamdu is a pure language (similar to Haskell).  
Execution of code with effects is performed only when the user explicitly chooses so.

