
GoCode
We learn by doing, by falling down,
and by picking ourselves back up
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Lambdas

Lambdas

- A lambda creates anonymous functions.

- A way of creating a function on the fly.

f = lambda x, y : x + y

f(1,2)

```
def f(x,y):
    return x + y
```

LISP

- Style of programming called functional programming.

- Derived from a language called LISP.

In LISP, you really only have two things, functions and lists.

```
(defun metric-conv (a b)
  (let ((num-a (num-split a)))
      (metric-convert (read-from-string (car num-a)) (string-to-base (cdr num-a)) (string-to-base b))))
```

Structuring code in a functional manner you can separate out algorithms from the details.

Functional tools

Map - map a function over a list

map(lambda x: (float(5)/9)*(x-32),[32.0,100.0]

Filter - filter out elements in a list

filter(lambda x: x % 2,[0,1,3,6])

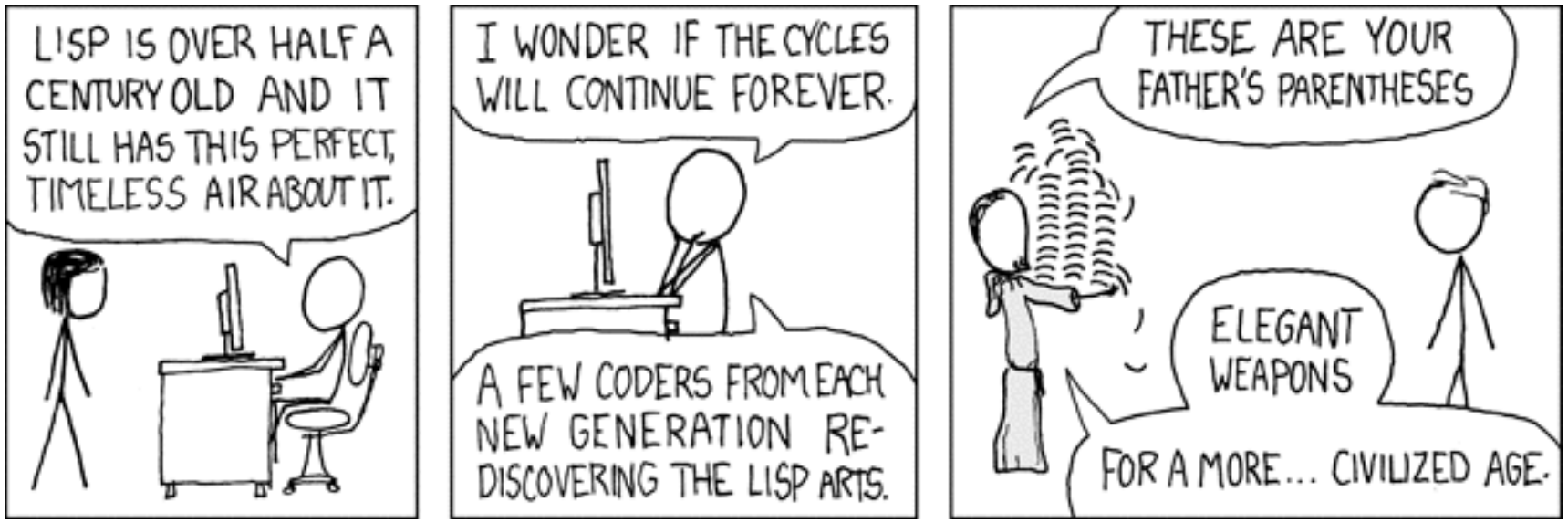
Reduce - reduce a list to one element

reduce(lambda x,y: x+y, [47,11,42,13])

Key Points

- Lambdas allow you to create functions on the fly.
- Functional programming is a different style of programming.
- Javascript relies heavily on lambdas and callbacks.
- Functional programming is a powerful tool.

Key Points


LISP IS OVER HALF A CENTURY OLD AND IT STILL HAS THIS PERFECT, TIMELESS AIR ABOUT IT.
I WONDER IF THE CYCLES WILL CONTINUE FOREVER.
A FEW CODERS FROM EACH NEW GENERATION RE-DISCOVERING THE LISP ARTS.
THESE ARE YOUR FATHER'S PARENTHESES
ELEGANT WEAPONS
FOR A MORE... CIVILIZED AGE.