

Pudding Eater¹

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October 10, 2017²

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Conrad Barski. *Land of Lisp: Learn to Program in Lisp, One Game at a Time!*, chapter 4, pages 49–66. No Starch Press, 2010. ISBN 9781593273491. URL <http://landoflisp.com>

² Last updated October 11, 2017

Defining the Arch-Enemy Variable

Since at first we don't know who the pudding eater (a.k.a. our **arch-enemy**) is, set the initial value to *nil*.

```
1 <* 1>≡  
  (defvar *arch-enemy* nil)
```

This definition is continued in chunk 8.
Root chunk (not used in this document).
Defines:
 arch-enemy, used in chunks 3, 5, and 9.

“Global variable names should start and end with asterisks (also known in this context as earmuffs)” [Brown and Rideau, 2017].

Defining the Pudding-Eater Function

This chapter introduces *cond*, an extremely versatile function that's “been around since the Lisp Stone Age.” The basic form is as follows.

```
(cond (test-form form*)  
  ...)
```

Since *test-forms* are evaluated for truthiness, we can branch on which *person* ate our pudding.

If *<it was Henry 2>*, the Lisp alien, *<blame Henry 3>*;

If *<it was Johnny 4>*, *<blame Johnny 5>*.

If it was someone else, *<ask them why 6>*.

The *cond* version of *pudding-eater* then, would look like this:

```
7 <cond-flavoured pudding-eater 7>≡  
  (λ (person)  
    (cond ((<it was Johnny 4>) <blame Johnny 5>)  
          ((<it was Henry 2>) <blame Henry 3>)  
          (t <ask them why 6>))))
```

Root chunk (not used in this document).

More succinctly, with *case*, we can define the *pudding-eater* function.

```
8 <* 1>+≡  
  (defun pudding-eater (person)  
    (case person  
      ((henry) <blame Henry 3>)  
      ((johnny) <blame Johnny 5>)  
      (otherwise <ask them why 6>))))
```

Defines:
 pudding-eater, used in chunk 9.

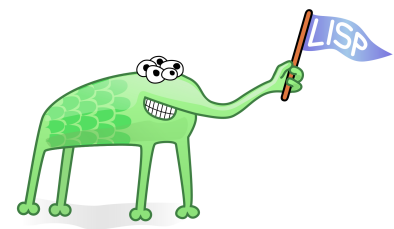


Figure 1: Henry, the Lisp Alien

```
2 <it was Henry 2>≡  
  (eq person 'henry)  
This code is used in chunk 7.  
3 <blame Henry 3>≡  
  (setf *arch-enemy* 'stupid-lisp-alien)  
  '(curse you lisp alien - you ate my pudding)  
This code is used in chunks 7 and 8.  
Uses *arch-enemy* 1.
```

```
4 <it was Johnny 4>≡  
  (eq person 'johnny)  
This code is used in chunk 7.
```

```
5 <blame Johnny 5>≡  
  (setf *arch-enemy* 'useless-old-johnny)  
  '(i hope you chocked on my pudding johnny)  
This code is used in chunks 7 and 8.  
Uses *arch-enemy* 1.
```

```
6 <ask them why 6>≡  
  '(why you eat my pudding stranger ?)  
This code is used in chunks 7 and 8.
```

Full Listing

```
(defvar *arch-enemy* nil)

(defun pudding-eater (person)
  (case person
    ((henry) (setf *arch-enemy* 'stupid-lisp-alien)
              '(curse you lisp alien - you ate my pudding))
    ((johnny) (setf *arch-enemy* 'useless-old-johnny)
              '(i hope you choked on my pudding johnny))
    (otherwise '(why you eat my pudding stranger ?))))
```

Example Session

After loading `src/pudding.lisp`, you might have *(a session 9)* like this:

```
$ rlwrap sbcl --load src/pudding.lisp
```

```
9 <a session 9>≡
> (pudding-eater 'johnny)
(I HOPE YOU CHOKED ON MY PUDDING JOHNNY)
> *arch-enemy*
USELESS-OLD-JOHNNY
> (pudding-eater 'george-clooney)
(WHY YOU EAT MY PUDDING STRANGER ?)
```

Root chunk (not used in this document).
Uses `*arch-enemy*` 1 and `pudding-eater` 8.

References

Conrad Barski. *Land of Lisp: Learn to Program in Lisp, One Game at a Time!*, chapter 4, pages 49–66. No Starch Press, 2010. ISBN 9781593273491. URL <http://landoflisp.com>.

Robert Brown and François-René Rideau. Google Common Lisp Style Guide: Global variables and constants. https://google.github.io/styleguide/lispguide.xml?showone=Global_variables_and_constants#Global_variables_and_constants, September 2017. Accessed: 2017-10-08.