

Classes in Lisp



Advanced Programming 2016/2017
19/05/2017

Group 8:

Teachers:

Bruno Filipe Belo Ferreira
António Paulo Teles Leitão

Jorge Heleno nº 79042
Ricardo Mota nº 78131
Miguel Touret nº 78215

Objective



Implement a class system for common lisp

Class Structure



Each class consists of a single Hash Table

Inheritance



In order to help with Inheritance each class has two global variables:

- One for the recognizer functions
- Other for the Inherited values

Extension: Setters

```
58 ;creates a separate function setter
59 ,@(mapcar #'(lambda (x)
60               `(defun ,(gen-symbol name "-set-" x) (,name newvalue)
61                 (setf (gethash ',x (aref ,name 1)) newvalue)
62               )
63           ) values
64 )
65 ;uses defsetf ex:(defsetf getter-function setter-function)
66 ;for the (setf (person-name person) "newname") to work
67 ,@(mapcar #'(lambda (x)
68               `(defsetf ,(gen-symbol name "-" x) ,(gen-symbol name "-set-" x))
69           ) values
70 )
```

Difficulties



The meta-programming of lisp can be quite confusing

Conclusion



Due to time constraints no more extensions could be added

Questions

