

```
;;; cl-typesetting copyright 2003-2004 Marc Battyani see license.txt for the details
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;;; The homepage of cl-typesetting is here: http://www.fractalconcept.com/asp/html/cl-
typesetting.html
```

```
(in-package typeset)
```

```
;;; A lisp pretty printer for Common Lisp
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```
(defparameter *pp-font-size* 9)
(defparameter *pp-default-decoration* '("courier" (0.0 0.0 0.0)))
(defparameter *pp-keyword-decoration* '("courier" (0.8 0.0 0.0)))
(defparameter *pp-common-lisp-decoration* '("courier" (0.0 0.0 0.4)))
(defparameter *pp-string-decoration* '("courier" (0.0 0.5 0.0)))
(defparameter *pp-comment-decoration* '("courier" (0.2 0.2 0.6)))
(defparameter *pp-symbol-decoration-table* (make-hash-table))
```

```
(defun add-symbol-decoration (symbol decoration)
  (setf (gethash symbol *pp-symbol-decoration-table*) decoration))
```

```
(loop for (symbol . decoration) in '((defvar "courier-bold" (0.0 0.0 0.5))
                                     (defun "courier-bold" (0.0 0.2 0.5))
                                     (defmethod "courier-bold" (0.0 0.2 0.5)))
      do (add-symbol-decoration symbol decoration))
```

```
(defun split-comment (line)
  (let ((comment-pos (position #\; line))) (line))
  (if comment-pos
      (values (subseq line 0 comment-pos)(subseq line comment-pos))
      line))
```

```
(defun clean-line (line)
  (setf line (copy-seq line))
  (map-into line #'(lambda (char)
                    (if (find char "()"`#
                               #\Space
                               char))
                    line))
```

```
(defun process-lisp-line (line)
  (multiple-value-bind (code comment)(split-comment line)
    (let* ((cleaned-line (clean-line code))
           (cl-package (find-package 'common-lisp))
           (decorations '())
           (start 0)
           (trimmed 0)
           (length (length cleaned-line)))
      (iter:iter
       (setf trimmed (position #\Space cleaned-line :start start :test #'char/=))
       (while (and trimmed (< trimmed length)))
       (for (values obj end) = (ignore-errors
                               (read-from-string
                                cleaned-line nil nil
                                :start trimmed :preserve-whitespace t)))
       (unless (numberp end)
         (setf end (position #\Space cleaned-line :start trimmed :test #'char=)))
       (while (and (numberp end) (< end length)))
       (cond ((keywordp obj)
              (push (list* trimmed end *pp-keyword-decoration*) decorations))
             ((stringp obj)
              (push (list* trimmed end *pp-string-decoration*) decorations))
             ((gethash obj *pp-symbol-decoration-table*)
              (push (list* trimmed end (gethash obj *pp-symbol-decoration-table*)) decorations))
             ((and (symbolp obj)(eq (symbol-package obj) cl-package))
              (push (list* trimmed end *pp-common-lisp-decoration*) decorations)))
       (setf start end))
      (setf start 0)
      (loop for (start-tok end-tok font-name color) in (nreverse decorations) do
```

```
(when (/= start start-tok)
  (with-text-compilation
    (verbatim (subseq line start start-tok))))
(with-text-compilation
  (with-style (:font font-name :font-size *pp-font-size* :color color)
    (verbatim (subseq line start-tok end-tok))))
(setf start end-tok)
(with-text-compilation
  (when (< start length)
    (verbatim (subseq line start)))
  (with-style (:font (first *pp-comment-decoration*)
                :font-size *pp-font-size*
                :color (second *pp-comment-decoration*))
    (verbatim comment)
    (when (zerop length) (verbatim " ") :eol))))

(defmethod process-lisp-code ((s stream))
  (with-text-compilation
    (paragraph (:h-align :left :top-margin 10
                :left-margin 5 :right-margin 5
                :font "courier" :font-size *pp-font-size*)
      (loop for line = (read-line s nil)
            while line
            do (with-text-compilation
                 (process-lisp-line line)
                 )))))

(defmethod process-lisp-code ((lisp-file pathname))
  (with-open-file (s lisp-file :direction :input)
    (process-lisp-code s)))

(defmethod process-lisp-code ((lisp-string string))
  (with-input-from-string (s lisp-string)
    (process-lisp-code s)))

(defun pprint-lisp-file (lisp-code pdf-file &optional title)
  (with-document ()
    (let* ((margins '(30 50 30 50))
           (print-stamp (multiple-value-bind (second minute hour date month year)
                          (get-decoded-time)
                          (format nil "Printed on ~4D~2,'0D~2,'0D ~2,'0D:~2,'0D"
                                  year month date hour minute)))
           (header (compile-text ()
                        (paragraph (:h-align :center
                                           :font "Helvetica-BoldOblique" :font-size 12)
                          (put-string (cond
                                       (title title)
                                       ((pathnamep lisp-code)(namestring lisp-code))
                                       (t "Lisp Source Code")))))
                        (vspace 1)
                        (hrule :dy 0.5)))
           (footer (lambda (pdf:*page*)
                     (compile-text (:font "Helvetica" :font-size 10)
                       (hrule :dy 1/2)
                       (hbox (:align :center :adjustable-p t)
                         (verbatim print-stamp)
                         :hfill
                         (verbatim
                           (format nil "Page ~d"
                                   (1+ (position pdf:*page* (pages pdf:*document*))))))))))
           (content (compile-text () (process-lisp-code lisp-code)))
           (draw-pages content :margins margins :header header :footer footer)
           (when pdf:*page* (finalize-page pdf:*page*))
           (pdf:write-document pdf-file)))
```