

Documentation for the product.ss teachpack

The teachpack `product.ss` contains structures used for manipulating product information. Information on how to install teachpacks can be found on the course Web site.

1 Structures

(define-struct single-product (name origin))
;; A **single-product** is a structure (*make-single-product n o*), where
;; *n* is a string and
;; *o* is a string denoting the country of origin.

(define-struct sales-product (ID prod))
;; A **sales-product** is a structure (*make-sales-product i p*), where
;; *i* is an integer and
;; *p* is either a single-product or a product-list.

;; A **product-list** is either
;; *empty* or
;; *(cons sp pl)*, where
;; *sp* is a sales-product and
;; *pl* is a product-list.

2 Built-in data

To save you time, the teachpack includes the definition of many constants. You are welcome to create more definitions along with the functions that you create for labs and assignments.

;; Examples of single-product
(**define** *lipbalm* (*make-single-product* "lipbalm" "Denmark"))
(**define** *lipgloss* (*make-single-product* "lipgloss" "Cuba"))
(**define** *handlotion* (*make-single-product* "hand lotion" "Kenya"))
(**define** *shampoo* (*make-single-product* "shampoo" "Canada"))
(**define** *conditioner* (*make-single-product* "conditioner" "New Zealand"))
(**define** *soap* (*make-single-product* "soap" "Canada"))
(**define** *facialscrub* (*make-single-product* "facialscrub" "Cuba"))

;; Examples of sales-product, where each prod is a single-product.
(**define** *lipbalm-pack* (*make-sales-product* 123 *lipbalm*))
(**define** *lipgloss-pack* (*make-sales-product* 103 *lipgloss*))
(**define** *handlotion-pack* (*make-sales-product* 192 *handlotion*))
(**define** *shampoo-pack* (*make-sales-product* 156 *shampoo*))
(**define** *conditioner-pack* (*make-sales-product* 183 *conditioner*))

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(define soappack (make-sales-product 134 soap))
(define facialscrubpack (make-sales-product 122 facialscrub))

;; Examples of sales-product, where some elements of the product-list
;; are in turn sales-products containing product-lists
(define lipkit (make-sales-product 342 (list lipbalmpack lipglosspack)))
(define hairkit (make-sales-product 356 (list shampooopack conditionerpack)))
(define facekit (make-sales-product 344 (list soappack facialscrubpack)))
(define cleankit (make-sales-product 399
                                   (list soappack shampooopack facialscrubpack)))

;; Examples of sales-product, some elements of prod are lists
(define promokit (make-sales-product 453 (list lipkit soappack hairkit)))
(define allkit (make-sales-product 567
                                   (list lipkit hairkit facekit cleankit)))
(define bargainkit (make-sales-product 684 (list allkit promokit
                                                handlotionpack lipkit)))

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