



Exercises XML files extra

Exercise 1

For this exercise you will again use the XML file *plants.xml*.

Write a program that prints a price list of the plants. You get to choose which way:

```
List of plants, sorted by
A: Alphabet
H: Price (high to low)
L: Price (low to high)
Your choice:
```

You keep showing the menu until the user enters an A, a, H, h, L or l. Write a separate function for this.

To print the list you will need to put all the names and prices of the plants in the XML-file in one list. Again, write a separate function to achieve this. So the list looks like this:

```
[['BLOODROOT', '$2.44'], ['COLUMBINE', '$9.37'], ['MARSH MARIGOLD', '$6.81'], ['COWSLIP', '$9.90'], ['DUTCHMAN'S-BREECHES', '$6.44'], ... ]
```

The user will then -depending on his choice- see one of these price lists (you only see the first 10 lines).

Choice A

```
$9.58 | ADDER'S-TONGUE
$8.86 | ANEMONE
$4.59 | BEE BALM
$7.16 | BERGAMONT
$9.80 | BLACK-EYED SUSAN
$2.44 | BLOODROOT
$8.56 | BLUE GENTIAN
$2.57 | BUTTERCUP
$2.78 | BUTTERFLY WEED
$7.89 | CALIFORNIA POPPY
```

Choice H

```
$9.90 | COWSLIP
$9.80 | BLACK-EYED SUSAN
$9.58 | ADDER'S-TONGUE
$9.37 | COLUMBINE
$9.34 | CROWFOOT
$9.26 | JACOB'S LADDER
$9.16 | GRECIAN WINDFLOWER
$9.04 | VIOLET, DOG-TOOTH
$9.03 | GINGER, WILD
$8.86 | ANEMONE
```

Choice L

```
$2.44 | BLOODROOT
$2.57 | BUTTERCUP
$2.78 | BUTTERFLY WEED
$2.80 | PHLOX, WOODLAND
$2.98 | MAYAPPLE
$3.02 | CARDINAL FLOWER
$3.20 | WAKE ROBIN
$3.23 | JACK-IN-THE-PULPIT
$3.90 | TRILLIUM
$3.99 | LIVERLEAF
```

Tip:

You'll have to sort the formed list in different ways. The sort-method we discussed in Chapter 5 has several parameters possible. Look for the meaning of `key=itemgetter(1)`

Exercise 2

For this exercise you will use the XML-file *customers.xml*.

Write a program that creates a new XML file in which the *customers'* attributes have disappeared. *Discount* has become a separate node and the *language* is now an attribute of *name*.

```
<customers>
  <customer>
    <name language="NL">An Andriesen</name>
    <telephone>014/230998</telephone>
    <discount>yes</discount>
  </customer>
  <customer>
    <name language="F">Bart Bols</name>
    <telephone>016/238974</telephone>
    <discount>no</discount>
  </customer>
  <customer>
    <name language="NL">Carl Cerstiaens</name>
    <telephone>014/452945</telephone>
    <discount>yes</discount>
  </customer>
  <customer>
    <name language="NL">Dirk Driesen</name>
    <telephone>015/286413</telephone>
    <discount>no</discount>
  </customer>
</customers>
```

Tip: If you want to remove all the attributes of a node, use
node_name.attrib = {}

Exercise 3

Write a program to merge *books1.xml* and *books2.xml* into one file. You can assume that both input files have the same structure.