

joli.py

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#!/usr/bin/env python3
# -*- coding: utf-8 -*-

#
# fichier: joli.py
# version: 0.5.0
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#
# (tous les symboles non internationaux sont volontairement omis)
#

import string

class joli(object):

    def __init__(self, car="?"): # const. globale: "?" vaut monome.INDET_DEG_0
        """ _ """
        self.__car = car
        self.__nombre = 1
        self.__gauche = None
        self.__droite = None

    def car(self):
        """ _ """
        return self.__car

    def nombre(self):
        """ _ """
        return self.__nombre

    def a_plat(self, concis =True):
        """ _ """
        s = ""

        liaison = " * "
        if concis: liaison = ""

        if self.__gauche is not None:
            s = liaison + self.__gauche.a_plat(concis)

        if self.__nombre == 1:
            s = "{}".format(self.__car) + s
        else:
            s = "{}^{}".format(self.__car, self.__nombre) + s

        if self.__droite is not None:
            s = self.__droite.a_plat(concis) + liaison + s

        return s

    def __repr__(self):
        """ _ """
        return "[joli:\n__car={},\n__nombre={},\n__gauche={},\n__droite={}\n]\n"\
            .format(self.__car, self.__nombre, id(self.__gauche), id(self.__droite))

    def __str__(self):
        """ _ """

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        return self.a_plat()

def inserer(self, x):
    """ _ """
    if not(x in string.ascii_letters):
        return

    if self.__car == x:
        self.__nombre += 1
        return

    if self.__car < x:
        if self.__gauche is None:
            self.__gauche = joli(x)
        else:
            self.__gauche.inserer(x)
        return

    if self.__droite is None:
        self.__droite = joli(x)
    else:
        self.__droite.inserer(x)

def nombre_noeuds(self):
    """ _ """
    n = 1
    if self.__gauche is not None:
        n += self.__gauche.nombre_noeuds()

    if self.__droite is not None:
        n += self.__droite.nombre_noeuds()

    return n

def format_indet(s, concis =True):
    """ _ """
    if len(s) == 0:
        return ""

    n = joli(s[0])
    s = s[1:]
    for c in s: n.inserer(c)

    return n.a_plat(concis)
```