demo_l8dn003_arbres

March 31, 2021

[17]:

```
a,b,c = "a","b","c"
arbre = (a,((b,((a,()),(c,()),(a,()))),(c,((a,((b,()),(a,()))),(a,())))))
```

[18]:

```
print(arbre)
```

```
('a', (('b', (('a', ()), ('c', ()), ('a', ()))), ('c', (('a', (('b', ()), ('a',
())))), ('a', ())))))
```

[24]:

```
# Un petit programme pour afficher de façon un peu plus lisible un ABR
# Algorithme de "pretty print" classique.
def pretty_abr(t, prof=0):
    if t is not None:
        (r,lf) = t
        print("%s%s" % (" "*prof, r))
        for f in lf:
            pretty_abr(f,prof+2)
```

[25]:

```
pretty_abr(arbre)
```

```
a
  b
    a
    c
    a
  c
    a
      b
      a
    a
```

[19]:

```
def feuille(noeud):
    return noeud[1] == ()
def liste_fils(noeud):
    return noeud[1]
```

[44]:

```
def parcours_rec(noeud):
#    print(noeud[0], end='')
    if not feuille(noeud):
```

```python
        for f in liste_fils(noeud):
            parcours_rec(f)
#    print(noeud[0], end='')
```

[45]:

```python
parcours_rec(arbre)
```

```
acabbaaaca
```

[51]:

```python
def prof_max(noeud):
    if feuille(noeud):
        return 0
    lp = []
    for f in liste_fils(noeud):
        lp.append(prof_max(f))
    return 1 + max(lp)
```

[52]:

```python
print(prof_max(arbre))
```

```
3
```

[ ]:

```python

```