Porteee_variable

November 16, 2019

1 Portée des variables

1.1 Exercice 1

```
In [2]: a = 1

        def f():
            a = 734
            print(a)

        f()
        print(a)
```

```
734
1
```

```
In [3]: a = 1

        def f():
            a = a + 1
            print(a)

        f()
        print(a)
```

```
        ---------------------------------------------------------------------------

        UnboundLocalError                         Traceback (most recent call last)

        <ipython-input-3-1d6e735d55df> in <module>
          5     print(a)
          6
    ----> 7 f()
          8 print(a)
```

```
      <ipython-input-3-1d6e735d55df> in f()
        2
        3 def f():
  ----> 4     a = a + 1
        5     print(a)
        6


      UnboundLocalError: local variable 'a' referenced before assignment


In [4]: a, b, c = 731, 734, 735

        def f():
            b, c = 736, 737
            def g():
                c = 738
                print(a, b, c)
            g()
            print(a, b, c)

        f()
        print(a, b, c)

731 736 738
731 736 737
731 734 735
```

1.2 Exercice 2

```
In [10]: def incremente1(a):
             a = a + 1

         def incremente2():
             global a
             a = a + 1

         def incremente3():
             a = a + 1

         a = 734
         for k in range(10):
             incremente1(a)
         print(a)
         for k in range(10):
             incremente2()
         print(a)
```

```
    for k in range(10):
        incremente3()
```

734
744

```
        ---------------------------------------------------------------------------

        UnboundLocalError                       Traceback (most recent call last)

        <ipython-input-10-54c387949ed9> in <module>
         17 print(a)
         18 for k in range(10):
    ---> 19     incremente3()


        <ipython-input-10-54c387949ed9> in incremente3()
          7
          8 def incremente3():
    ----> 9     a = a + 1
         10
         11 a = 734


        UnboundLocalError: local variable 'a' referenced before assignment
```

1.3 Passage d'argument

In [1]: *#Pour l'utilisation de Python Tutor dans le notebook*
        from metakernel import register_ipython_magics *#nécessite d'installer metakernel avec*
        register_ipython_magics()

In [3]: %%tutor

```
        def incremente(x):
            x = x + 1

        x = 4
        incremente(x)
```

<IPython.lib.display.IFrame at 0x7f739c7bc9e8>

In [4]: %%tutor

```
        def ajout_liste(L, a):
```

```
        L.append(a)

    L = []
    ajout_liste(L, 1)
```

<IPython.lib.display.IFrame at 0x7f739c7afbe0>