

<p style="text-align: center;">TD INFO02 – CORRECTION LES BOUCLES FOR ET WHILE</p>

capital.py

```
def suite1(n):
    u = 500
    for k in range(1,n+1):
        u = 1.02*u+100
    return u
```

```
def suite2(montant):
    u = 500
    n = 0
    while u < montant:
        n = n+1
        u = 1.02*u+100
    return n
```

fibonacci.py

```
def fibo(n):
    a = 0
    b = 1
    for i in range(2,n+1):
        c = a + b
        a = b
        b = c
    return b
```

sommes.py

```
import math as m
```

```
def sommel(n):
    s = 0
    for k in range(1,n+1):
        s = s + k**2
    return s
```

```
def somme2(n):
    s = 0
    for k in range(1,n+1):
        if k % 2 == 0:
            s = s + k**2
    return s
```

```
def somme3(n):
    s = 0
    for k in range(2,n+1,2):
        s = s + k**2
    return s
```

```
def somme4(n):  
    s = 0  
    for k in range(1,n+1):  
        s = s + 1/k**2  
    return s
```

fact.py

```
def fact(n):  
    produit = 1  
    for k in range(2,n+1):  
        produit = produit * k  
    return produit
```

double6.py

```
import random as rd  
  
de1 = 0  
de2 = 0  
nbessai = 0  
  
while not (de1==6 and de2==6):  
    de1 = rd.randint(1,6)  
    de2 = rd.randint(1,6)  
    nbessai = nbessai + 1  
    print(nbessai,de1,de2)
```

nbparfait.py

```
def parfait(n):  
  
    # calcule la somme des diviseurs de n  
    somme = 0  
    for div in range(1,n):  
        if n % div == 0:  
            somme = somme + div  
  
    # test  
    return somme == n  
  
for n in range(2,1000):  
    if parfait(n) == True:  
        print(n)  
  
# les 3 nombres parfaits inférieurs à 1000 sont 6, 28 et 496
```