

# CH5-prog.py

```
01| def affiche1(n):
02|     for i in range(n+1):
03|         print(i)
04|
05| def affiche1bis(n):
06|     i=0
07|     while i<n+1:
08|         print(i)
09|         i+=1
10|
11| def affiche2(k):
12|     if k<10:
13|         print(k)
14|         affiche(k+1)
15|
16| from turtle import *
17|
18| lst=[100,90,80,70,60]
19| a=20
20|
21| def carre(d):
22|     for i in range(4):
23|         forward(d)
24|         left(90)
25|
26| def dessine1(liste,angle):
27|     for d in liste:
28|         left(angle)
29|         carre(d)
30|
31| def dessine2(liste,i,angle):
32|     if i>=0 and i<len(liste):
33|         left(angle)
34|         carre(liste[i])
35|         dessine2(liste,i+1,angle)
36|
37| def produit(n,p):
38|     if p==0:
39|         return(0)
40|     else:
41|         return(n+produit(n,p-1))
42|
43| def factorielle1(n):
44|     res=1
```

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45 |     for i in range(1,n):
46 |         res=i*res
47 |     return(res)
48 |
49 | def factorielle2(n):
50 |     if n>0:
51 |         return(n*factorielle2(n-1))
52 |     else:
53 |         return(1)
54 |
55 | def factorielle3(n,acc):
56 |     if n>0:
57 |         return(factorielle3(n-1,acc*n))
58 |     else:
59 |         return(acc)
60 |
61 | def fibo1(n):
62 |     u,v=0,1
63 |     for i in range(n):
64 |         u,v=v,u+v
65 |     return(u)
66 |
67 | def fibo2(n):
68 |     if n==0 or n==1:
69 |         return(n)
70 |     else:
71 |         return(fibo2(n-1)+fibo2(n-2))
72 |
73 | def fibo3(n,a,b):
74 |     if n==0:
75 |         return(a)
76 |     else:
77 |         return(fibo3(n-1,b,a+b))

```