

Exercices in Python

Christophe@pallier.org

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(1) What does the following code do?

```
if 2 + 2 == 5:
    print("Sorry?")
else:
    print("Bonjour!")
```

Answer: It prints 'Bonjour!'

(2) What does the following program do?

```
state = 1
for i in range(100):
    if state == 1:
        print('A')
    if state == 2:
        print('B')
    if state == 3:
        print('C')
    state = state + 1
    if state == 4:
        state = 1
```

Answer: It prints a sequence of alternating A, B and C

- (3) What does the following program do (% is the modulo operator that returns the remainder of the integer division)

```
n = 100
while n > 0:
    if n%7 == 0:
        print(n)
    n = n - 1
```

Answer: It prints the numbers between 1 and 100 that are divisible by 7

A more efficient version would be:

```
[x for x in range(101) if x%7 == 0]
```

- (4) What does the function ssn do in the following code?

```
def ss(l):
    s = 0
    for x in l:
        s = s + x * x
    return s

def ssn(n):
    return ss(range(n+1))
```

Answer: It returns the sum of squares of the first 'n' integers

- (5) What does the following function do?

```
def un(l):
    u = []
    for x in l:
        if not(x in u):
            u.append(x)
    return u
```

Answer: It returns the set of elements in the list l