

## Sujet 11

### Exercice 1

```
def conv_bin(n):
    t = []
    while n != 0:
        b = n % 2
        t.append(b)
        n = n // 2
    t.reverse()
    return t
```

### Exercice 2

```
def tri_bulles(T):
    n = len(T)
    for i in range(n-1, 0, -1):
        for j in range(i):
            if T[j] > T[j+1]:
                temp = T[j]
                T[j] = T[j+1]
                T[j+1] = temp
    return T

def tri_bulles2(T):
    n = len(T)
    for i in range(n-1):
        for j in range(n-1, i, -1):
            if T[j-1] > T[j]:
                temp = T[j]
                T[j] = T[j-1]
                T[j-1] = temp
    return T
```