2024 sujet 9

Exercice 1

```python
def effectif_notes(notes_eval):
    tab = [0]*11
    for note in notes_eval:
        tab[note] = tab[note] + 1
    return tab

def notes_triees(eff):
    notes_triees = []
    for note in range(11):
        notes_triees = notes_triees + [note]*eff[note]
    return notes_triees
```

Exercice 2

```python
def dec_to_bin(nb_dec):
    q, r = nb_dec // 2, nb_dec % 2
    if q == 0:
        return "1"
    else:
        return dec_to_bin(q) + str(r)

def bin_to_dec(nb_bin):
    if len(nb_bin) == 1:
        if nb_bin == '0':
            return 0
        else:
            return 1
    else:
        if nb_bin[-1] == '0':
            bit_droit = 0
        else:
            bit_droit = 1
        return 2 * bin_to_dec(nb_bin[:-1]) + bit_droit
```