

Exercice 5

1a

rouge
vert
jaune
rouge
jaune

1b

```
def taille_file(F):  
    t = 0  
    ft = creer_file_vide()  
    while not est_vide(F):  
        t = t + 1  
        enfiler(ft,  
                defiler(F))  
    while not est_vide(ft):  
        enfiler(F, defiler(ft))  
    return t
```

2

```
def former_pile(F):  
    p = creer_pile_vide()  
    pt = creer_pile_vide()  
    while not est_vide(F):  
        empiler(pt, defiler(F))  
    while not est_vide(pt):  
        empiler(p, depiler(pt))  
    return p
```

3

```
def nb_elements(F, ele):  
    nb = 0  
    ft = creer_file_vide()  
    while not est_vide(F):  
        x = defiler(F)  
        if x == ele:  
            nb = nb + 1  
        enfiler(ft, x)  
    while not est_vide(ft):  
        enfiler(F, defiler(ft))  
    return nb
```

4

```
def verifier_contenu(F, nb_rouge, nb_vert, nb_jaune):  
    return nb_elements(F, "rouge") <= nb_rouge and nb_elements(F, "vert") \  
    <= nb_vert and nb_elements(F, "jaune") <= nb_jaune
```