

Exercice 2 : 10 points

from random import randint

```
def empiler(p,e):  
    p.append(e)
```

```
def depiler(p):  
    return p.pop()
```

```
def creer_pile():  
    return []
```

```
def est_vide(p):  
    return len(p)==0
```

```
def taille_pile(p):  
    return len(p)
```

```
def inverser(p):                # 1.5 point  
    p2=creer_pile()  
    while 1:  
        if est_vide(p):  
            break  
        x=depiler(p)  
        empiler(p2,x)  
    return p2
```

```
def couper(p):                # 2.25 points  
    try:  
        assert not est_vide(p)  
        n=randint(1,taille_pile(p))  
        print ("taille_pile aleatoire = ",n)  
        q=creer_pile()  
        for i in range(n):  
            empiler(q,depiler(p))  
    except AssertionError:  
        print('pile est vide')  
    return p,inverser(q)
```

```
def melange(p1,p2):           # 4.25points  
    p = creer_pile()  
    while not (est_vide(p1) or est_vide(p2)):  
        #choix:p1 et p2 non vide
```

```

        choix=randint(1,2)
        if choix== 1 :
            q=p1
        else :
            q=p2
        empiler(p,depiler(q))
    while not est_vide(p1):
        empiler(p,depiler(p1))
    while not est_vide(p2):
        empiler(p,depiler(p2))
    return inverser(p)

```

```

def TestJeu(n,k):          # 2 points
    p=creer_pile()
    for i in range(n):
        for e in range(1,k+1) :
            empiler(p,e)

    print(p)
    #couper
    p,q=couper(p)
    # melanger
    r=melange(p,q)
    print('melange',r)

```

TestJeu(3,3)