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# Série révision 1
# Exercice 1
# Question 1
def init(L):
    # assert condition => vérifier que la condition est correcte
    assert type(L) == list, "type incorrect"
    L.clear() #vider la liste
    for i in range(100):
        L.append(1)

# Question 2
def multiple(L,i):
    for j in range(i+1,len(L)):
        if j % i == 0:
            L[j]=0

# Question 3
def suivant(L,i):
    j = i + 1
    while L[j] == 0:
        j +=1
    return j

# Question 4
def crible(L):
    from math import sqrt
    init(L)
    i=2
    while i<int(sqrt(len(L))):
        multiple(L,i)
        i = suivant(L,i)
    p=[]
    for i in range(2,100):
        if L[i]==1:
            p.append(i)
    return p

# Question 5
def crible_recursive(L,i):
    if i>int(sqrt(len(L))):
        return None
    else:
        multiple(L,i)
        i = suivant(L,i)
        crible_recursive(L,i)

#Question 7
if __name__ == '__main__':
    L = list()
    i = 2
    from math import sqrt
    init(L)
    print(crible_recursive(L,i))
    p = [i for i in range(2,100) if L[i]==1]
    print(p)

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