

TP n°3 d'informatique

Modules nécessaires :

```
from time import time
import matplotlib.pyplot as plt
from random import randint

def ecartMax(t):
    L_max_global = []
    for i in range(len(t)):
        L_max_local = []
        for j in range(i, len(t)):
            L_max_local.append(abs([t[i]-t[j]]))
        L_max_global.append(max(L_max_local))
    return max(L_max_global)
```

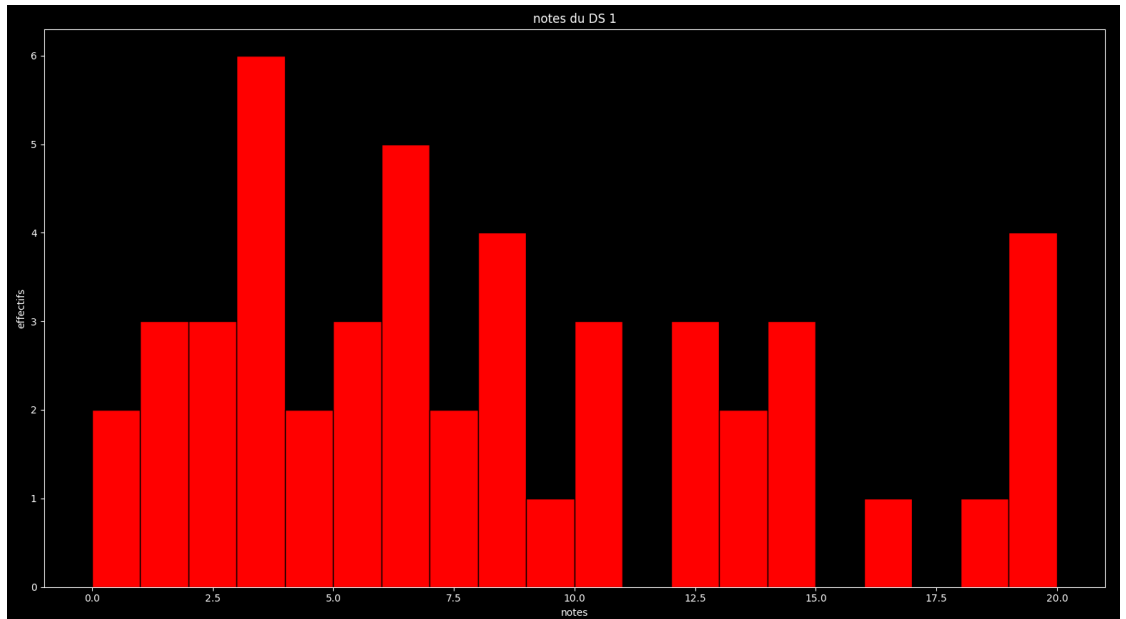
```
data = [randint(0, 20) for k in range(48)]
```

Renvoi :

```
[0, 4, 9, 12, 16, 1, 1, 4, 3, 20, 7, 11, 2, 0, 11, 4, 12, 6,
3, 4, 11, 8, 0, 14, 9, 9, 1, 8, 17, 18, 6, 19, 8, 8, 16, 0,
3, 18, 5, 12, 18, 3, 16, 10, 18, 16, 17, 16]
```

TODO : faire la moyenne

```
plt.style.use('dark_background')
plt.figure()
plt.hist(data, range=(0, 20), bins=20, color='red', edgecolor='black')
plt.title('notes du DS 1')
plt.xlabel('notes')
plt.ylabel('effectifs')
plt.show()
```



Renvoie :

```
def ajout(p):
    t0 = time()
    fich = open('listepremiers', 'r')
    L = fich.read()
    fich.close()
    L1 = L.split('\n')
    L2 = L1[0:-1]
    l = len(L2)
    P = [int(L2[i]) for i in range(l)]
    fich = open('listepremiers', 'a')
    n = P[-1]
    while len(P) < 1 + p:
        n += 2
        prem = True
        k = 0
        while P[k]**2 <= n and prem:
            if n % P[k] == 0:
                prem = False
            k += 1
        if prem:
            P.append(n)
            ch = str(n)+'\n'
            fich.write(ch)
    fich.close()
    return time()-t0
```

```
print(ajout(999))
```

Voir le PDF
