Codes du TP 13

```
import numpy as np
import numpy.random as rd
import matplotlib.pyplot as plt

#Loi uniforme

def loiuniforme(n):
    return rd.randint(1,n+1)

#Loi de Bernoulli

def loibernoulli(p):
    y=rd.random()
    if y<p:
        return 1
    else:
        return 0

#Loi binomiale

def loibinomiale(n,p):
    nb=0
    for k in range(n):
        if loibernoulli(p)==1:
            nb=nb+1
    return nb

#Loi géométrique

def loigeometrique(p):
    rang=1
    while loibernoulli(p)==0:
        rang=rang+1
    return rang
```

```
#Sujet Ecricome 2005

def ecricome(N):
    S=np.zeros(N)
    for k in range(10000):
        i=1
        M=N
        while rd.binomial(1,1/M)==0:
            i=i+1
            M=M-1
        S[i-1]=S[i-1]+1
    return S

s=ecricome(5)
x=np.arange(1,6)
plt.bar(x,s/10000)
```