

Codes du TP 14

```
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)
```