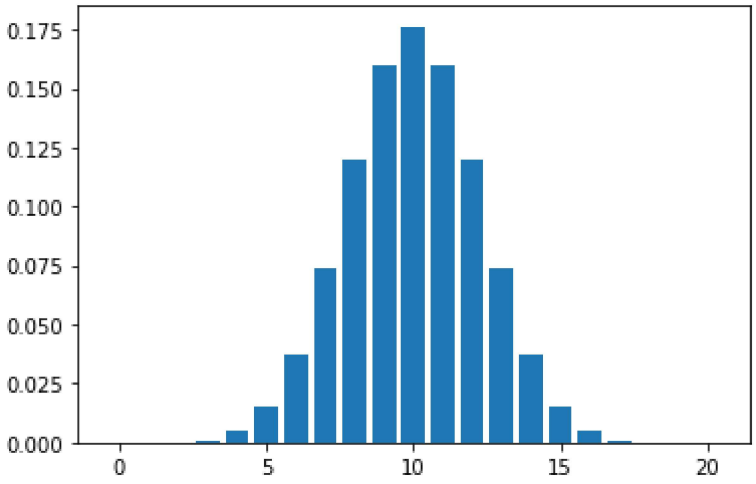
26-07-2023

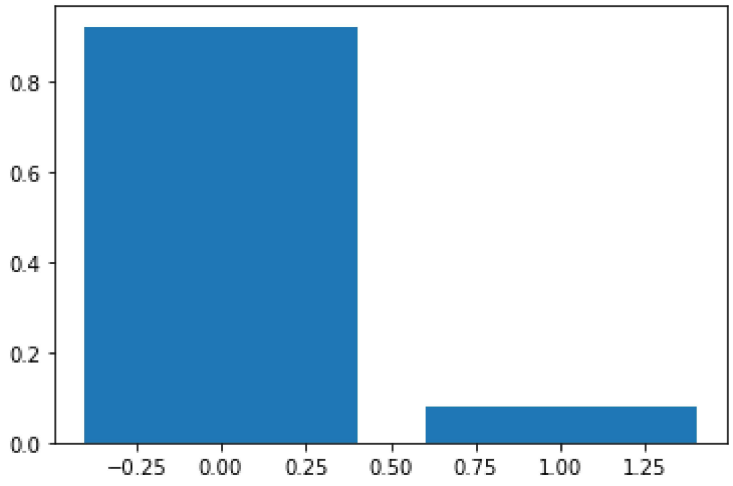
Perform Binomial, Bernoulli, Poisson ,Normal, Exponential distributions

In [1]:
```
from scipy.stats import binom
import matplotlib.pyplot as plt
```

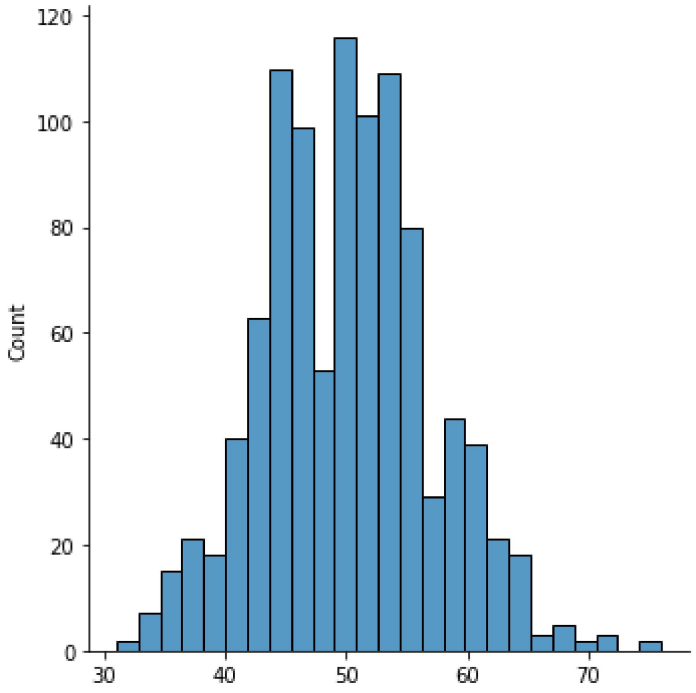
In [2]:
```
n=20
p=0.5
r_values=list(range(n+1))
dist=[binom.pmf(r,n,p) for r in r_values]
plt.bar(r_values,dist)
plt.show()
```



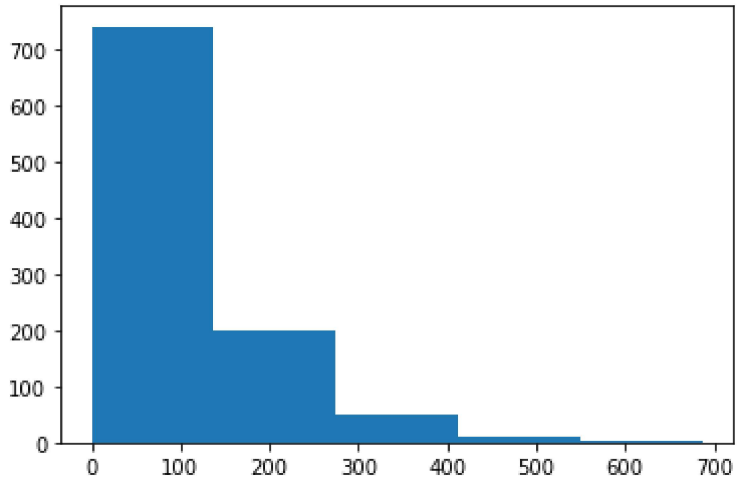
In [3]:
```
from scipy.stats import bernoulli
bd=bernoulli(0.08)
x=[0,1]
plt.bar(x,bd.pmf(x))
plt.show()
```



In [4]:
```
from numpy import random
import matplotlib.pyplot as plt
import seaborn as sns
sns.displot(random.poisson(lam=50,size=1000))
plt.show()
```



In [5]:
```
import numpy as np
import matplotlib.pyplot as plt
exp=np.random.exponential(100,1000)
count,bins,ignored=plt.hist(exp,5)
plt.show()
```

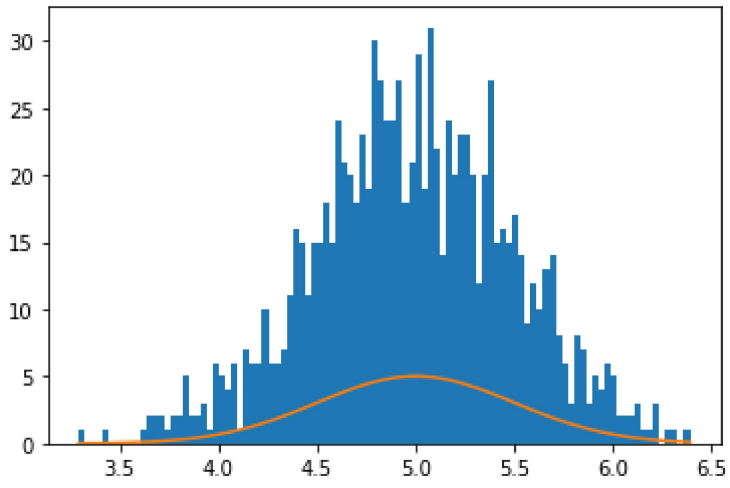


In [7]:
```
import matplotlib.pyplot as plt
import numpy as np

mu,sigma=5,0.5
s=np.random.normal(mu,sigma,1000)
count,bins,ignored=plt.hist(s,100)

#distribution curve:
plt.plot(bins,1/sigma*np.sqrt(2*np.pi)*np.exp(-(bins-mu)**2/(2*sigma**2)))

plt.show()
```



In [ ]: