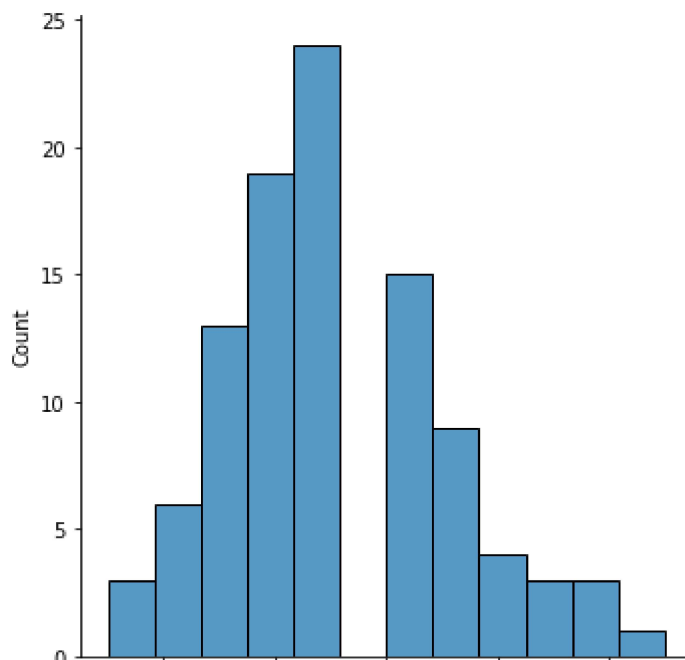


Distribution - Day 7

kaviyadei 20106064

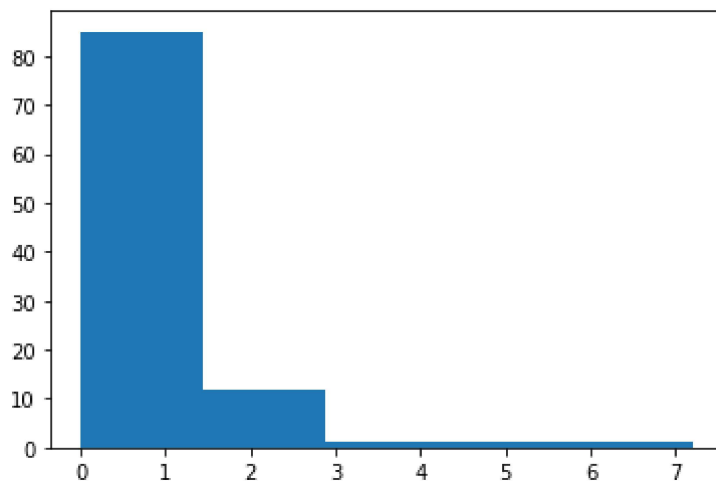
1.poisson distribution

```
In [2]: from numpy import random
import matplotlib.pyplot as plt
import seaborn as sns
sns.displot(random.poisson(lam=5,size=100))
plt.show()
```



2.exponential distribution

```
In [4]: import numpy as np
import matplotlib.pyplot as plt
exp=np.random.exponential(1,100)
count,bins,ignored=plt.hist(exp,5)
plt.show()
```



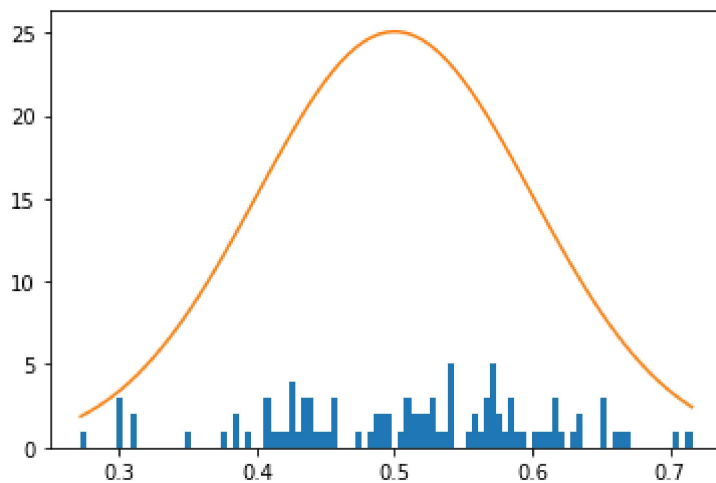
3.normal distribution

```
In [22]: import matplotlib.pyplot as plt
import numpy as np

mu,sigma=0.5,0.1
s=np.random.normal(mu,sigma,100)

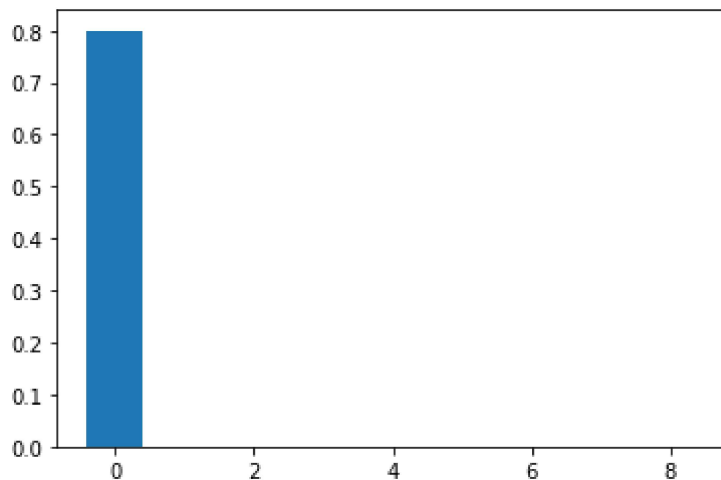
count,bins,ignored=plt.hist(s,100)
#distrubuted curve
plt.plot(bins,1/sigma*np.sqrt(2*np.pi)*np.exp(-(bins-mu)**2/(2*sigma**2)))

plt.show()
```



4.bernoulli distribution

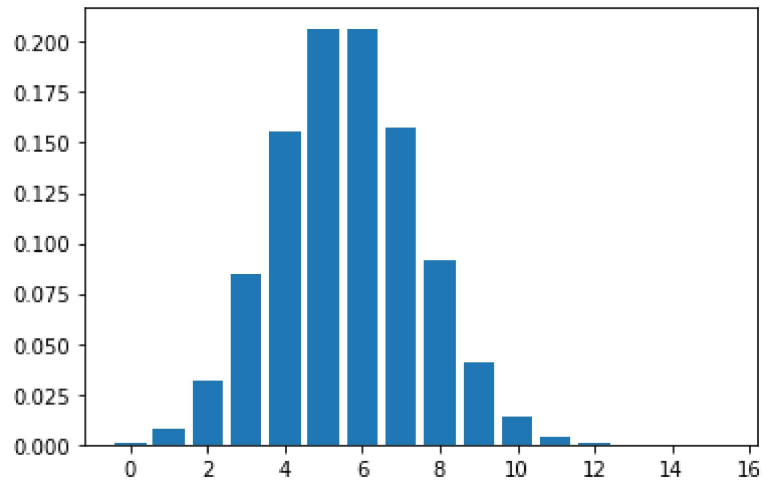
```
In [13]: from scipy.stats import bernoulli  
bd=bernoulli(0.2)  
x=[0,8]  
plt.bar(x,bd.pmf(x))  
  
plt.show()
```



5.binomial distribution

```
In [14]: import numpy as np  
from numpy import random  
from scipy.stats import binom  
import matplotlib.pyplot as plt
```

```
In [15]: n=14  
p=0.4  
r_values=list(range(n+2))  
dist=[binom.pmf(r,n,p) for r in r_values]  
plt.bar(r_values,dist)  
plt.show()
```



```
In [ ]:
```