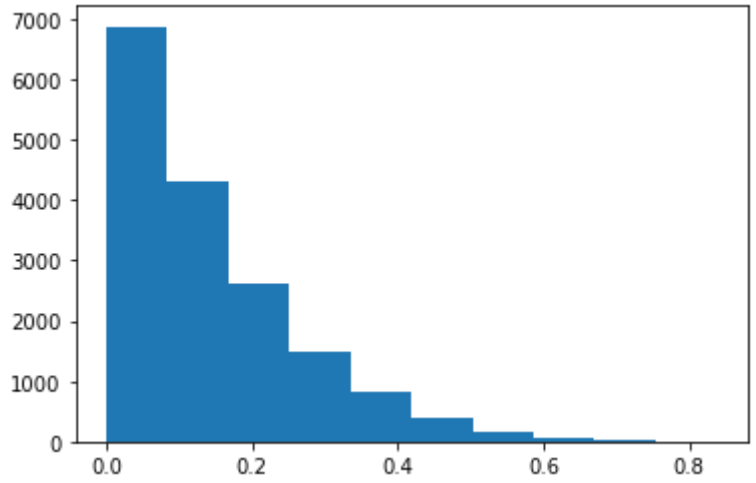
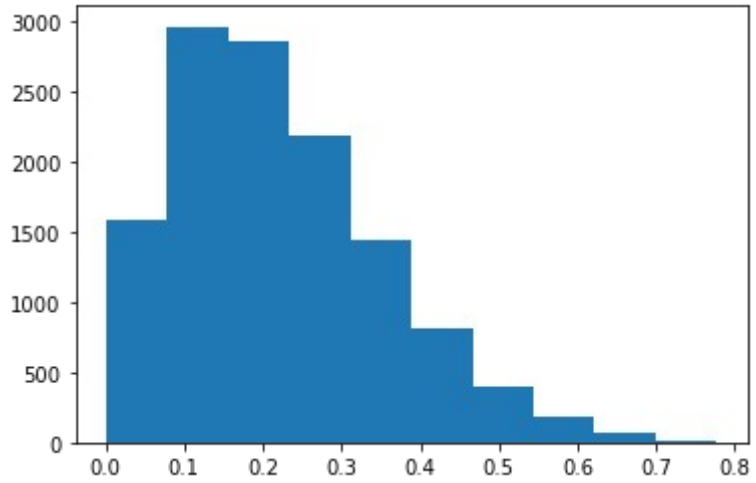
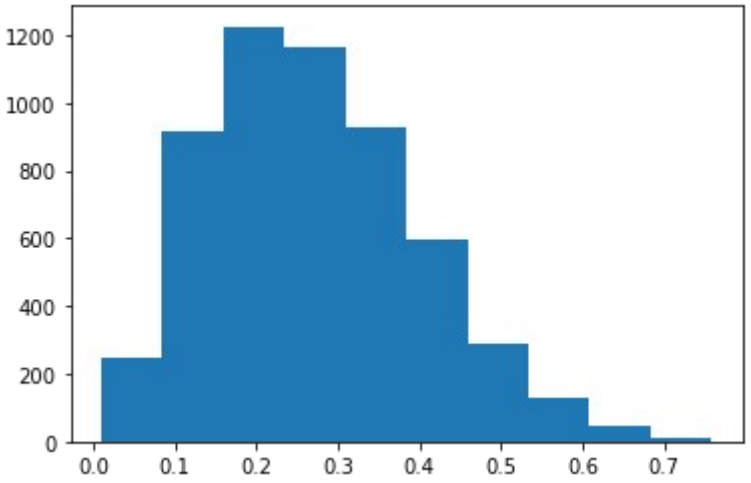
TRINAYAN DAS
180123051

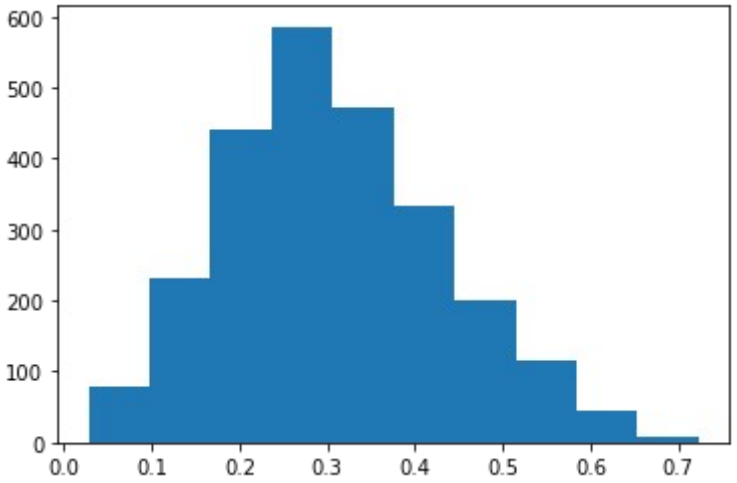
In [4]:

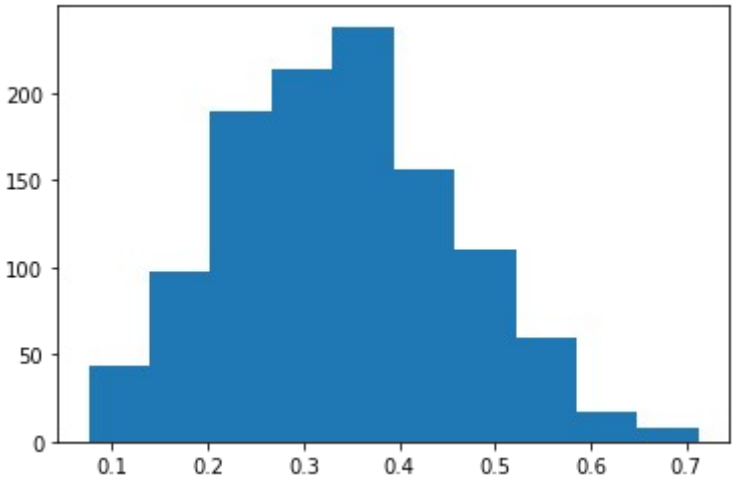
```
import matplotlib.pyplot as plt
import math
import numpy as np
b=100000
alpha_1=[1,2,3,4,5]
alpha_2=[6,7,8,9,10]
maximum=[]
function=[]
for num in range(0,5):
    B=(math.gamma(alpha_1[num])*math.gamma(alpha_2[num]))/(math.gamma(alpha_1[num]+alpha_2[num]))
    maximum.append((alpha_1[num]-1)/(alpha_1[num]+alpha_2[num]-2))
    function.append((1/B)*(maximum[num]**(alpha_1[num]-1))*((1-maximum[num]**(alpha_2[num]-1))))
    u1=np.random.rand(1,b)
    u2=np.random.rand(1,b)
    y=[]
    for a in range(0,b):
         if (function[num]*u2[0][a])<=((1/B)*(u1[0][a]**(alpha_1[num]-1))*((1-u1[0][a])**(alpha_2[num]-1
))):
                    y.append(u1[0][a])
    plt.hist(y)

    plt.show()
```


7000
6000
5000
4000
3000
2000
1000
0
0.0
0.2
0.4
0.6
0.8


3000
2500
2000
1500
1000
500
0
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8


1200
1000
800
600
400
200
0
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7


600
500
400
300
200
100
0
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7



In [ ]: