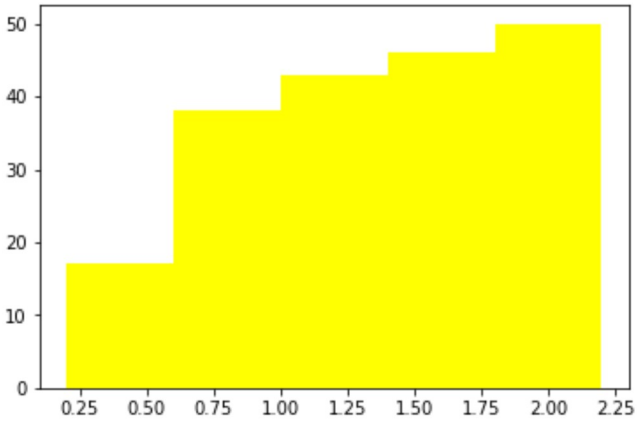
In [5]:
```
#Genenral (for Array)
import numpy as np

import pandas as pd

from numpy.random import randn

from pandas import Series,DataFrame

# For Stats
from scipy import stats

#For Plots
#matplotlib is the library and pyplot is the plotting module within that library.
#matplotlib has some more toolkits beyond just simple plotting
import matplotlib as mpl

import matplotlib.pyplot as plt

import seaborn as sns

#To Display plots in IPython Notebook
%matplotlib inline
```

In [6]:
```
data=randn(100)
```

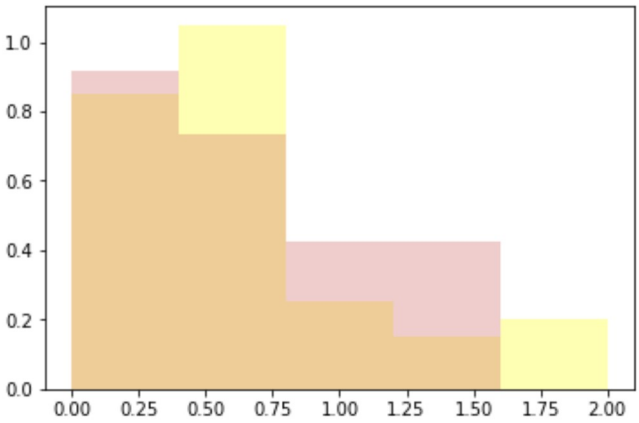
In [86]:
```
histo=plt.hist(data,bins=5,range=(0,2),align='right',orientation='vertical',
               stacked=True,cumulative=True,color='yellow',histtype='stepfilled',la
bel='Histogram'
               )


# {'bar', 'barstacked', 'step',  'stepfilled'}
```



In [95]:
```
data2=randn(80)
```

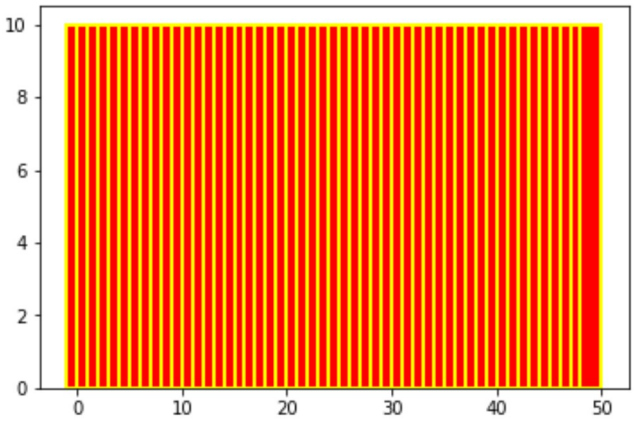
In [102]:
```
#Overlapping Datasets
plt.hist(data,bins=5,range=(0,2),color='yellow',density=True,alpha=0.3)

plt.hist(data2,bins=5,range=(0,2),color='indianred',density=True,alpha=0.3)
```

Out[102]:
```
(array([0.91463415, 0.73170732, 0.42682927, 0.42682927, 0.        ]),
 array([0. , 0.4, 0.8, 1.2, 1.6, 2. ]),
 <a list of 5 Patch objects>)
```

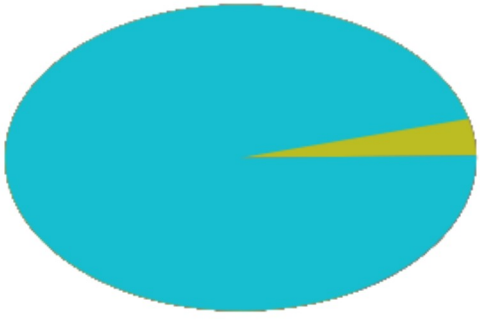


In [68]:
```
histo1=plt.Rectangle(range(10),10,10,angle=90)
```

In [66]:
```
histo2=plt.bar(range(50),10,2,color='red',edgecolor='yellow',label='histo2 Chart',l
inewidth=2)
```



In [84]:
```
histo3=plt.pie(data)
```

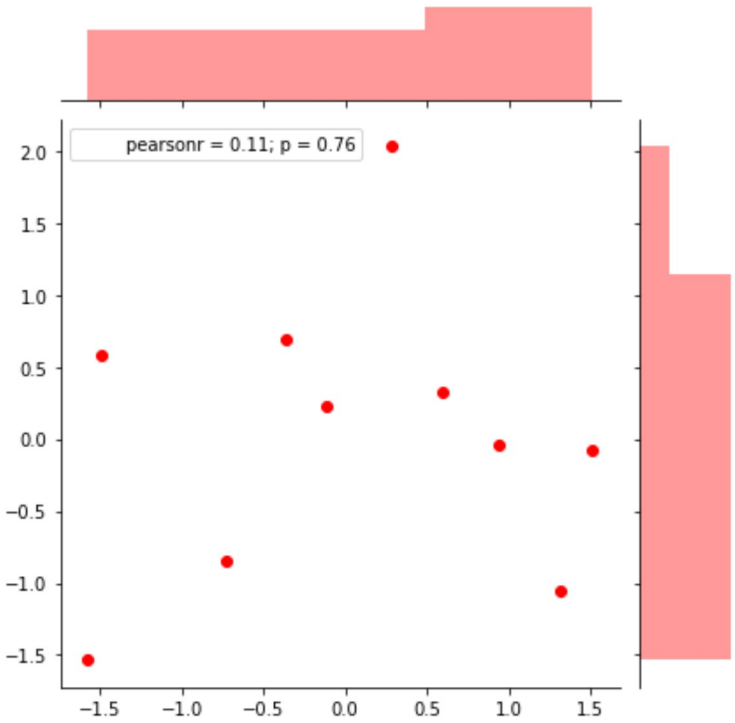


In [108]:
```
set1=randn(10)
set2=randn(10)
```

In [119]:
```
print(set1)
print(set2)
sns.jointplot(set1,set2,kind='scatter',color='red')


#kind : { "scatter" | "reg" | "resid" | "kde" | "hex" }
```

```
[-1.49273962  0.59748332 -0.11506578  1.5154512  -0.72832008 -0.36030513
  1.3199747  -1.57803426  0.28834915  0.9379169 ]
[ 0.57911791  0.32226859  0.2335312  -0.07329112 -0.85219069  0.68892206
 -1.05928562 -1.53495887  2.03308175 -0.04331451]

C:\Users\acpimpar\Anaconda3\lib\site-packages\matplotlib\axes\_axes.py:6462: Use
rWarning: The 'normed' kwarg is deprecated, and has been replaced by the 'densit
y' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
C:\Users\acpimpar\Anaconda3\lib\site-packages\matplotlib\axes\_axes.py:6462: Use
rWarning: The 'normed' kwarg is deprecated, and has been replaced by the 'densit
y' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
```

Out[119]: <seaborn.axisgrid.JointGrid at 0x12a105db898>



In [ ]:
```
#Pearson Correlation Coefficient
#The Pearson correlation coefficient is a very helpful statistical formula that mea
sures the strength between
#variables and relationships. In the field of statistics, this formula is often ref
erred to as the Pearson R
#test. When conducting a statistical test between two variables, it is a good idea
to conduct a Pearson #correlation coefficient value to determine just how strong th
at relationship is between those two variables.

#P value is a statistical measure that helps scientists determine whether or not th
eir hypotheses are correct.
#P values are used to determine whether the results of their experiment are within
the normal range of values
#for the events being observed
```