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Task 1:Write a Python program to find the maximum and minimum value of a given flattened array.

In [19]:
```
import numpy as np
flattened_array=np.array([[0, 1],[2, 3]])
max_val=np.max(flattened_array)
min_val=np.min(flattened_array)
print(flattened_array)
print('max value: ',max_val)
print('min val :',min_val)
```

```
[[0 1]
 [2 3]]
max value:  3
min val : 0
```

Task:2 Write a NumPy program to compute the median of flattened given array. Note: First array elements raised to powers from second array

In [20]:
```
import numpy as np
array = np.array([[0, 1, 2, 3, 4, 5], [6, 7, 8, 9, 10, 11]])
flattened_array = array.flatten()
median_value = np.median(flattened_array)
print("Original array:")
print(array)
print("Median of the array:", median_value)

```

```
Original array:
[[ 0  1  2  3  4  5]
 [ 6  7  8  9 10 11]]
Median of the array: 5.5
```

Task:3 Write a NumPy program to compute the mean, standard deviation, and variance of a given array along the second axis.

In [57]:
```
array=np.array([0,1,2,3,4,5])
mean=np.mean(array,axis=0)
mean
```

Out[57]: 2.5

In [58]:
```
std=np.std(array,axis=0)
std
```

Out[58]: 1.707825127659933

In [59]:
```
var=np.var(array,axis=0)
var
```

Out[59]: 2.9166666666666665

Task:4 Write a Python program to count number of occurrences of each value in a given array of non-negative integers.

In [62]:
```
array=np.array([0, 1, 6, 1, 4, 1, 2, 2, 7])
count=np.bincount(array)
count

```

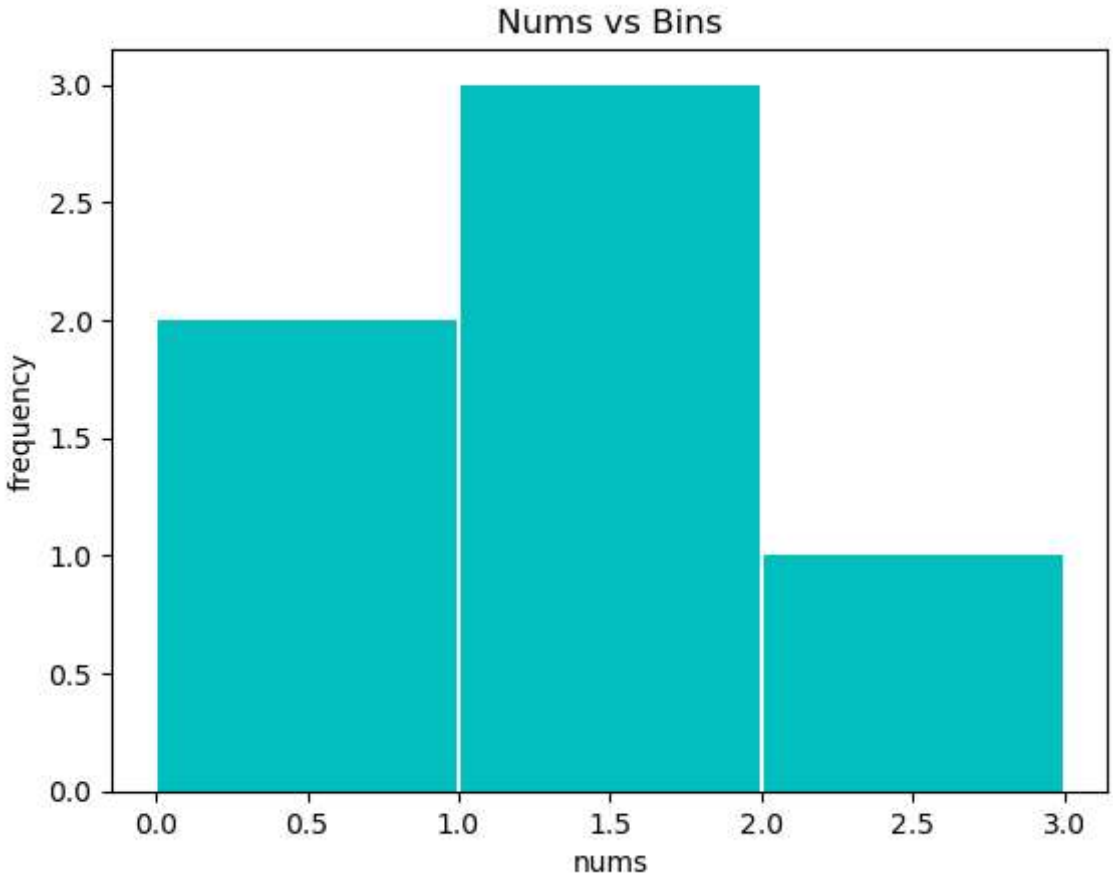
Out[62]: array([1, 3, 2, 0, 1, 0, 1, 1], dtype=int64)

Task5: Write a NumPy program to compute the histogram of nums against the bins.

In [106]:
```
import matplotlib.pyplot as plt
nums=np.array([0.5,0.7,1.,1.2,1.3,2.1])
bins=np.array([0,1,2,3],dtype='i')
result=plt.hist(nums,bins,color='c',alpha=1,rwidth=0.99)
print('result',result)
plt.xlabel('nums')
plt.ylabel('frequency')
plt.title('Nums vs Bins')
plt.show();


```

```
result (array([2., 3., 1.]), array([0., 1., 2., 3.]), <BarContainer object of
3 artists>)
```



In [ ]:
```
1
```