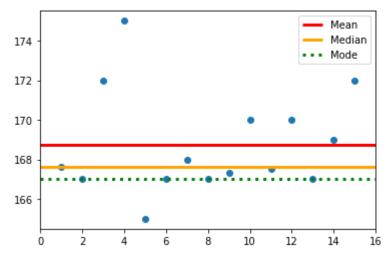Question 4 - For a given data of heights of a class, theheights of 15 students are recorded as 167.65, 167, 172, 175, 165, 167, 168, 167, 167.3, 170, 167.5, 170, 167, 169, and 172. Develop an application that computes; explore if there are any packages supported in your platform that depicts these measures / their calculations of central tendency in a visual form for ease of understanding. a. Mean height of the student b. Median and Mode of the sample space c. Standard deviation d. Measure of skewness. [(Mean-Mode)/standard deviation]

In [ ]:
```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

In [ ]:
```python
height = [167.65, 167, 172, 175, 165, 167, 168, 167, 167.3, 170, 167.5, 170, 1
x = list(range(1, len(height)+1))
```

In [ ]:
```python
data = pd.DataFrame({"x" : x, "height" : height})
data
```

Out[ ]:

	x	height
0	1	167.65
1	2	167.00
2	3	172.00
3	4	175.00
4	5	165.00
5	6	167.00
6	7	168.00
7	8	167.00
8	9	167.30
9	10	170.00
10	11	167.50
11	12	170.00
12	13	167.00
13	14	169.00
14	15	172.00

In [ ]:
```python
plt.xlim(0, len(height)+1)
plt.scatter(data['x'], data['height'])
Mean = np.mean(height)
Median = np.median(height)
Mode = data['height'].mode()[0]
Stddev = data['height'].std()
Skew = (Mean - Mode)/Stddev

plt.hlines(Mean, 0, 16, color = 'red', linestyle = 'solid', label = 'Mean', l:
plt.hlines(Median, 0, 16, color = 'orange', linestyle = 'solid', label = 'Med:
plt.hlines(Mode, 0, 16, color = 'green', linestyle = 'dotted', label = 'Mode',
#plt.text(0, 160, "Mean = {:.2f}" "\nMedian = {:.2f}" "\nMode = {:.2f}" "\nSt:
plt.legend()
plt.show()
```