

```
1. import numpy as np
2. import scipy as sy
3. import scipy.fftpack as syfp
4. import matplotlib.pyplot as plt
5. import csv
6. import math
7.
8. function = []
9.
10. frequency = 2
11. frequency2 = 5
12.
13. length = 256
14. x = sy.linspace(0.00, length*0.02, num=length)
15. for p in x:
16.     trigvalue = math.cos(2*math.pi*frequency*p)+math.cos(2*math.pi*frequency2*p)
17.     function.append(trigvalue)
18.
19. yf = syfp.fft(function)
20. f = syfp.fftfreq(length, np.mean(np.diff(x)))
21.
22. plt.subplot(2,1,1)
23. plt.plot(x, function, 'r-')
24.
25. plt.subplot(2,1,2)
26. plt.plot(abs(f), abs(yf), 'b-')
27.
28. plt.show()
```