Homework 2

Checking for palindromes in a list...

In [1]:
```
import numpy as np
import matplotlib.pyplot as plt
```

In [4]:
```
words = ['racecar', 'peach', 'kayak', 'noon', 'mathemati
```

In [16]:
```
def palindrome_check(word):

    boolean = True
    while len(word) > 1:
        if word[0] != word[-1]:
            boolean = False
            break
        else:
            word = word[1:-1]

    return boolean
```

In [25]:
```
palindrome = []
not_palindrome = []

for word in words:

    if palindrome_check(word):
        palindrome.append(word)
    else:
        not_palindrome.append(word)
```

In [36]:
```
print("These words are palindromes: " + str(palindrome)[
print("These words are not palindromes: " + str(not_pali
```

```
These words are palindromes: 'racecar', 'kayak', 'noon',
'rotator'
These words are not palindromes: 'peach', 'mathematics'
```

Graph smiley face

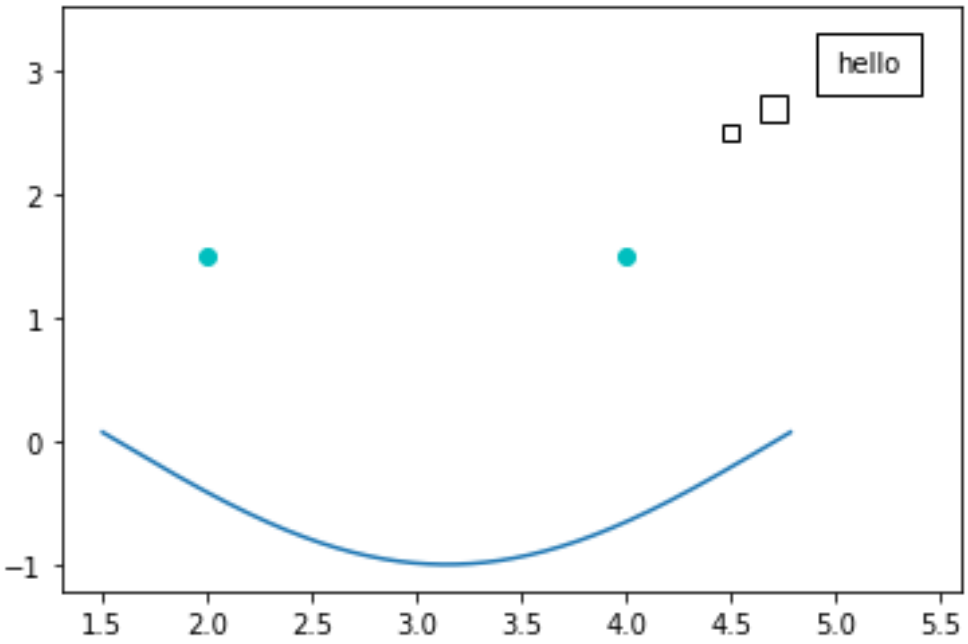
In [74]:
```
x = np.linspace(1.5,2*np.pi -1.5 ,1000)
```

In [75]:
```
y1 = np.cos(x)
```

In [103…
```
fig, ax = plt.subplots()

ax.plot(x,y1)
ax.plot([2,4],[1.5,1.5],'co')
ax.plot(4.5,2.5,'ks',markerfacecolor = 'none')
ax.plot(4.7,2.7,'ks', markersize = 10, markerfacecolor =
ax.plot([4.9,4.9,5.4,5.4,4.9],[2.8,3.3,3.3,2.8, 2.8],'k'
ax.text(5,3,'hello')
```

Out[103… Text(5, 3, 'hello')



In [ ]: