Every programming language has the idea of a **comment**. A comment is a bit of text that is intended for humans to read, but for the computer to ignore when running the code.

In Python, a comment is begun with a **#** sign, and continues to the end of the line. Here is an example:

```
import numpy as np
import matplotlib.pyplot as plt

theta = np.linspace(0, np.pi, 1000)

# the 'r--' below causes it to be a red dashed line, r for red and -- for dashed.
plt.plot(theta, np.sin(theta), 'r--')
plt.show()
```

Principles for commenting

1. Add comments when the code is likely to be confusing, or the intent of the code would not be otherwise clear.

2. You may also want to comment out code temporarily to prevent it from running.

0.1 Bad comments

```
C = 9.8 # the acceleration
x = np.arange(0, 100, 0.01) # x is the time
y = 100 - 0.5*C*x**2 # y is the height
```

If I had named the acceleration a or g, then I wouldn't have needed the comment. Similarly if I had named the time t, I wouldn't have needed a comment.