1. Project Euler 1

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23.

Find the sum of all the multiples of 3 or 5 below 1000.

Solution in euler.py (you can choose the number you want to divide)

To run

Solution:

This is a lineal regression problem.

We are going to use sklearn for solve the problem

Run ml_solution.py => 0.208

1. copy this line:

print 0.208

2. paste in https://www.hackerrank.com/challenges/correlation-and-regression-lines-7

Information in:
https://projecteuler.net/problem=1

2. Project Correlation and Regresion Lines – A Quick Recap #2

Here are the test scores of 10 students in physics and history:

```
Physics Scores  15  12  8   8   7   7   7   6   5   3
History Scores  10  25  17  11  13  17  20  13  9   15
```

Compute the slope of the line of regression obtained while treating Physics as the independent variable. Compute the answer correct to three decimal places.

Output Format

In the text box, enter the floating point/decimal value required. Do not leave any leading or trailing spaces. Your answer may look like: 0.255

This is **NOT** the actual answer - just the format in which you should provide your answer.

Solution:

This is a lineal regression problem.

We are going to use sklearn for solve the problem

Run ml_solution.py => 0.208

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Information in:
https://www.hackerrank.com/challenges/correlation-and-regression-lines-7
http://scikit-learn.org/stable/modules/linear_model.html

3. Byte The Correct Apple

The word "Apple" could generally refer to one of these two:
(a) Apple Inc., the great Computer giant.
(b) Apple, the fruit

You are provided a text file, with a number of lines. Each line contains either a sentence or a paragraph or a text snippet which could either be related to Apple, the computer company, or the apple, the fruit. Your task is to perform disambiguation between these two groups and identify which one is being referred to. It is possible that the plural or the possessive form of Apple might exist in some of the tests (apples, Apple's).

Training Data
You are provided with two text files, which contain near-complete text from the Wikipedia for Apple Inc. as well as apple the fruit. For offline inspection and access, you could access these two files here:
Text from Wikipedia entry on Apple-Computers
Text from Wikipedia entry on Apple the fruit

Also, when you submit your program, you can assume that these two text files are available in the directory where your program is run, and their names are "apple-computers.txt" and "apple-fruit.txt".

Solution:

This is a classification problem. We are interested to classfy a input text to (apple-comptuer or apple-fruit. We are going to use bag of words.

After try with tf-idf, without tf-idf, etc. And trying different algorithms as SVM, Naive Bayes... We have selected this configuration of pipeline:

```
pipeline = Pipeline([
    ('vectorizer',  CountVectorizer(ngram_range=(1, 2),stop_words='english')),
    ('classifier',  MultinomialNB()) ])
```

I got 90 of 100 in the hackerrank.

1. copy the code in nlp_hackerrank.py

2. paste in https://www.hackerrank.com/challenges/byte-the-correct-apple

Information in:

https://www.hackerrank.com/challenges/byte-the-correct-apple
http://scikit-learn.org/stable/tutorial/text_analytics/working_with_text_data.html
http://zacstewart.com/2015/04/28/document-classification-with-scikit-learn.html