# DSI - Project 1

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# Python Code Challenges (#1-#4)

Challenge 1: Largest Palindrome

- 906609 is the biggest palindrome, it is the product of: 993 and 913

Challenge 2: Summation of Primes

- Sum of all primes below 2000 = 277050

Challenge 3: Multiples of 3 and 5

- Sum of all multiples of 3 or 5 below 1,000 = 233168

Challenge 4: String Compressor

- function: str_comp(test_string, ignore_case=True)

Things I learned/rediscovered ...

★ Code can be endlessly tweaked. You have to stop somewhere - good enough is enough!

★ Taking a break from looking at a problem lets you see it with fresh eyes.

★ Multiplication order doesn't matter, so if you've already checked 999 x 500, you don't need to check 500 x 999.

# Python Code Challenges (#5)

Challenge 5: File Handling

- Ignored rows above column headers. Ignored columns which didn't have a column header and only few pieces of data.
- Assumed 'glucose_conc' = 0 isn't valid when attempting to predict whether or not someone has diabetes.
  >> So didn't include those rows in dataset.

BONUS Challenge: Diabetes

| age_interval | avg_glucose_conc |
|---|---|
| 20 to 29 | 114.613232 |
| 30 to 39 | 126.073171 |
| 40 to 49 | 125.709402 |
| 50 to 59 | 140.142857 |
| 60 to 69 | 138.827586 |
| 70 to 81 | 132.666667 |

Things I learned/rediscovered ...

★ Explore the data first, then decide the dataset you'll work on.

★ Assumptions are everywhere - but just because you assume something doesn't make it true.

★ Analysing data is about making choices and decisions.