Project_Euler_006

February 4, 2018

1 Project Euler Problem 6

The sum of the squares of the first ten natural numbers is, 1^2 + 2^2 + ... + 10^2 = 385

The square of the sum of the first ten natural numbers is, (1 + 2 + ... + 10)^2 = 55^2 = 3025

Hence the difference between the sum of the squares of the first ten natural numbers and the square of the sum is 3025 385 = 2640.

Find the difference between the sum of the squares of the first one hundred natural numbers and the square of the sum.

```
In [1]: just_sum = 0
        sum_squares = 0
        square_sum = 0

        for i in range(1, 101):
            just_sum += i
            sum_squares += i**2

        square_sum = just_sum**2

        print("The sum of squares is {}."
              .format(sum_squares))
        print("The square of the sum is {}."
              .format(square_sum))
        print("The difference between the two is {}."
              .format(square_sum - sum_squares))
```

```
The sum of squares is 338350.
The square of the sum is 25502500.
The difference between the two is 25164150.
```