Project_Euler_004

February 4, 2018

1 Project Euler Problem 4

A palindromic number reads the same both ways. The largest palindrome made from the product of two 2-digit numbers is 9009 = 91 Œ 99.

Find the largest palindrome made from the product of two 3-digit numbers.

In [1]:
```
# We use a nested for loop to check all possible products of
# 3-digit numbers.  To check if the product is a palindrome, we
# convert the product to a string, reverse the string, convert
# back to an integer, then see if that's equal to the original product.

max_palin_prod = 0
max_x = 0
max_y = 0

for x in range(100, 1000):
    for y in range(x, 1000):
        palin_check = int(str(x*y)[::-1])
        if (palin_check == x*y) and (x*y > max_palin_prod):
            max_palin_prod = x*y
            max_x = x
            max_y = y

print("Largest palindrome product: {} x {} = {}"
      .format(max_x, max_y, max_palin_prod))
```

```
Largest palindrome product: 913 x 993 = 906609
```