

# Python Programming

## While Loops Homework 4

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# Homework 1: Find NOs

- Read integer N, then read N strings (one per line).
  - Print only the strings (of 2 letters).
  - These 2 letters must be letter 'N' and letter 'O' (*regardless of lower/upper case/order*)
  - E.g. print "No", "ON", "no" but ignore e.g. "YEs", "Noooo"
  - That is, the word of 2 letters only N and O
  - See the picture



The screenshot shows a text editor window with a file path `/home/moust` at the top. The editor contains a list of strings, some of which are highlighted in green. To the left of the strings, there are match indicators: "Match: NO" for "NO", "Match: oN" for "oN", and "Match: no" for "no". The strings are: "9", "Yss", "NO", "no00", "oN", "Mostafa", "no", "nN", "o00ooo", and "oO".

```
/home/moust
9
Yss
NO
Match: NO
no00
oN
Match: oN
Mostafa
no
Match: no
nN
o00ooo
oO
```

# Homework 2: Reverse number

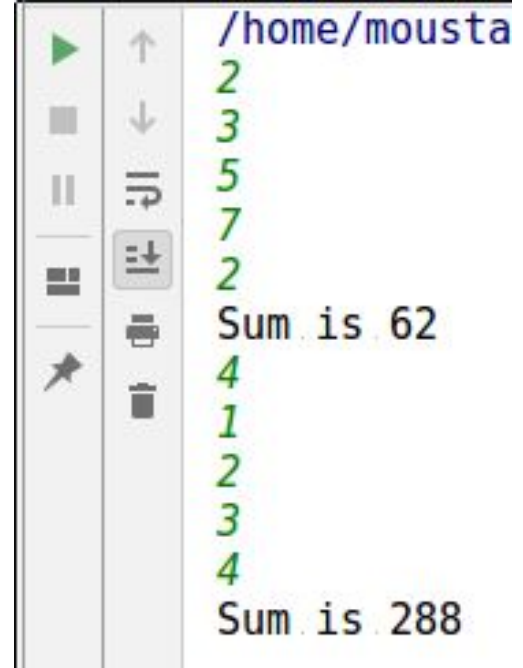
- Read an integer  $N$ , then find its reverse integer  $R$ 
  - Print  $R$   $R*3$
- input  $\Rightarrow$  Output
  - $123 \Rightarrow 321\ 963$

# Homework 3: Multiplication table

- Read an integer N and M, then print NxM lines for their multiplication table.
- Input 3 4
- Output
  - $1 \times 1 = 1$
  - $1 \times 2 = 2$
  - $1 \times 3 = 3$
  - $1 \times 4 = 4$
  - $2 \times 1 = 2$
  - $2 \times 2 = 4$
  - $2 \times 3 = 6$
  - $2 \times 4 = 8$
  - $3 \times 1 = 3$
  - $3 \times 2 = 6$
  - $3 \times 3 = 9$
  - $3 \times 4 = 12$

# Homework 4: Special Sum

- Read integer T for number of test cases.
- For each test case read integer N.
- Then read N integers a, b, c, ..... On **seperate** lines
- Compute the **sum** of:
  - (a, b\*b, c\*c\*c, d\*d\*d\*d, e\*e\*e\*e.....)
  - That is the k-th number is repeated k times
  - Don't use the power operator (\*\*)
- Expantation:
  - 2 test cases
  - 3 5 7 2
    - $(5 + 7*7 + 2*2*2) = 62$
  - 4 1 2 3 4
    - $(1+2*2+3*3*3+4*4*4*4) = 288$



```
/home/mousta
2
3
5
7
2
Sum is 62
4
1
2
3
4
Sum is 288
```

*“Acquire knowledge and impart it to the people.”*

*“Seek knowledge from the Cradle to the Grave.”*