

## KEY CONCEPTS:

We can use the `while` loop to execute a set of statements as long as a condition is true.

Please look at [https://www.w3schools.com/python/python\\_while\\_loops.asp](https://www.w3schools.com/python/python_while_loops.asp) for details if you need.

## HOMEWORK:

Use a separate cell for each problem! Save the Python script file with name: *yourname\_homework3.ipynb*. \* problems are a little more challenging.

Problem 1:

Ask the user for a number  $n$ , and then print numbers from 1 to the  $n$

Problem 2:

Print "Are we there yet?" to the screen 30 times.

Problem 3:

Ask the user for a number  $y$  and print all numbers between 1 and  $y$  that are odd

Problem 4:

Ask the user for a number between 1 and 30 and print its times table. E.g

```
Number_in = 9
```

```
9 x 1 = 9
```

```
9 x 2 = 18
```

```
9 x 3 = 27
```

```
...
```

```
9 x 10 = 90
```

Problem 5:

Make up a password and store it in a variable `my_passwd`.

Ask the user to enter the password. If they enter it correctly, tell them they successfully authenticated in  $n$  tries ( $n$  is the number of attempts needed). If they have not succeeded in 5 tries, tell them their account has been locked!

Problem 6\*:

Ask the user for a number  $k$  and then print  $k!$  (the factorial of the number  $k$ )

$k! = k(k-1)(k-2)...1$