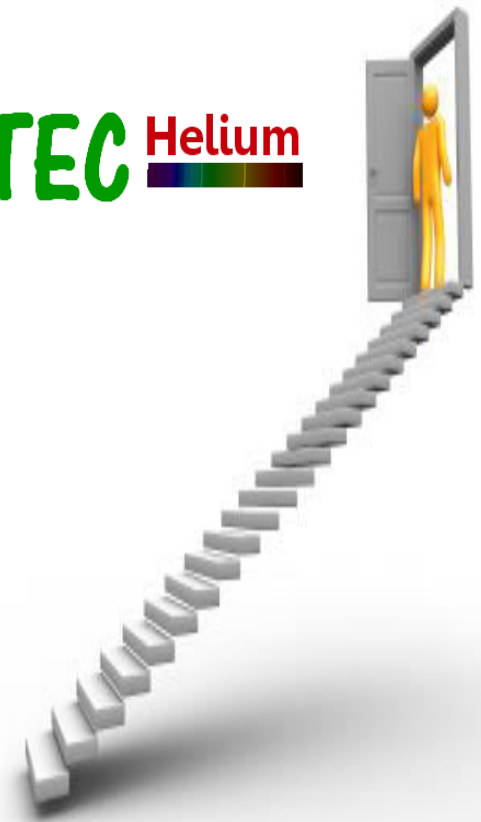


Lets Face it, now

# Project Oriented Python

## Python While Loop & Programs

**TEC** Helium



# while

- **while loop:** Executes a group of statements as long as a condition is True.
  - good for *indefinite loops* (repeat an unknown number of times)

- Syntax:  
`while condition:`  
`statements`

- Example:  
`number = 1`  
`while number < 200:`  
    `print number,`  
    `number = number * 2`

- Output:  
1 2 4 8 16 32 64 128

# Logic

- Many logical expressions use *relational operators*:

| Operator | Meaning                  | Example                    | Result |
|----------|--------------------------|----------------------------|--------|
| ==       | equals                   | <code>1 + 1 == 2</code>    | True   |
| !=       | does not equal           | <code>3.2 != 2.5</code>    | True   |
| <        | less than                | <code>10 &lt; 5</code>     | False  |
| >        | greater than             | <code>10 &gt; 5</code>     | True   |
| <=       | less than or equal to    | <code>126 &lt;= 100</code> | False  |
| >=       | greater than or equal to | <code>5.0 &gt;= 5.0</code> | True   |

- Logical expressions can be combined with *logical operators*:

| Operator | Example                          | Result |
|----------|----------------------------------|--------|
| and      | <code>9 != 6 and 2 &lt; 3</code> | True   |
| or       | <code>2 == 3 or -1 &lt; 5</code> | True   |
| not      | <code>not 7 &gt; 0</code>        | False  |

# Exercise

1. Write a program to print even number between 1 and 30.
2. Write a program to print prime number between 1 and 50
3. Write a program to count number of digits of the given integer.
4. Write a program to add digits of the given integer.

Thanks