#CodeYork

Assignment 1

Jack Romo

Graham Campbell

Introduction

Task 1 - Hello York!

This assignment will teach you how to open IDLE and print your name.

Open a new document in IDLE and print Hello York to the screen. Does it run? Make sure you know how to save and open the files you make. Ask if you need help.

Top Tip: The IDLE executes lines of code one at a time, as you type them in after the 'prompt', which looks like three arrows to the right (>>>). So when you type your code there and hit 'Enter', it will run on the next line, and the prompt will appear again for your next line.

Task 2 - Results may Vary

Sometimes, remembering things is pretty important. Variables will let us do that, which you'll be doing in this assignment. Suppose you start an interactive session and enter the following three assignment statements:

```
>>> x = 4

>>> y = 7

>>> z = 11
```

What will Python print as the value of the following expressions? Try to find the result manually and then compare your result by typing the expression in the interpreter.

```
>>> x * 2

>>> x ** 2

>>> x * y

>>> y / x

>>> y // x

>>> x + y * z

>>> x - y - z
```

Task 3 - Boolean Expressions

Sometimes we need to represent truth values. In this assignment, we'll be learning about booleans.

Make sure you understand how these evaluate with different values set for p and q (remember how to set variables from assignment 2).

```
>>> p

>>> p and q

>>> not (p and q)

>>> (not p) and q

>>> (not p) or (not q)
```

What will these values be when:

1. p = False; q = False
2. p = False; q = True
3. p = True; q = False
4. p = True; q = True

Extension: What if p and q are not boolean? Try it out!

Task 4 - If Statements

Now that we've got a handle on boolean expressions, we can start writing code that can make decisions.

Paste the following into IDLE:

```
x = 10

if x > 5:

    print("x is greater than 5")

else:

    print("x is less than or equal to 5")
```

Does it print what you expect? Try modifying the code so the else block runs instead.

Task 5 - Strings

Recall that Python has strings. Make sure you understand how these expressions will behave.

```
>>> word = "Test 123"

>>> len(word)

>>> word * 3

>>> (word + '! ') * 5
```

Copy the following line of code into your IDLE and hit 'Enter':

```
x = "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque facilisis tortor at
mattis dapibus. Vestibulum et sem vel arcu dictum egestas. Nam feugiat purus ante, at varius
nibh vehicula in. Etiam rhoncus, libero in laoreet laoreet, leo ligula consectetur erat, id
aliquam libero nisi sed ante. Quisque lacinia pellentesque enim, quis laoreet eros rhoncus a.
Aenean aliquam lectus nec finibus commodo. Duis varius fringilla congue. Nullam id quam
libero. Cras aliquet quis ante in ornare. Sed urna quam, vestibulum vel lectus vitae,
ullamcorper tincidunt nisi. Praesent et venenatis felis. Morbi semper, ex quis ultrices
cursus, lorem augue ultrices lorem, ut molestie sem dolor nec tortor."
```

After this, using x:

1. Find the length of x.
2. Print the 35th letter of x.
3. Print the entire paragraph in uppercase.
4. Find out how many vowels are in the paragraph.
5. How many words are in the string x?
6. Print the string to the screen backwards.