Introduction to Python II (Exercises 02)

1) Datetime module

Write a function called extradays() that receives a date and an integer representing a number of extra days to be added to the passed date.

Calculate the new date inside the function and return it.

2) Write a function datecomp() that receives two dates. The function calculates the number of days between the two dates and returns it. The function will also return the Boolean value **True** if the first date is earlier than the second date. The function returns two values.

Test the function by prompting for two date values and passing them to the function

Note: Use the method datetime.datetime.strptime() from the datetime module to convert your string dates (from input()) to date variables.

3) Bonus: Create a script that uses a function called simpleLogging. The function will receive a string with a message. Open a file for appending and write a line to the file in this format:

SEQ DateTime Message (Where SEQ is 001, 002, 003, etc).

Call the function from your main section in random intervals of 1 to 5 seconds. Call the function 10 times. Then read the file and display its content.

4) List Comprehensions (Simple)

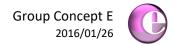
Write a program that uses a List Comprehension to do the following:

. Starting with the following list:

- . Create a new list with the square of all integers that are positive and odd.
- . Create a new list with the square of all integers that are positive and even.

The result will be the following lists:

[49,1] [4, 16, 36, 0, 64] Dept. Conted



5) Rewrite the following small program using a list comprehension (instead of the looping structure found on the given code).

##This program creates a list that includes the word's length from all the words in a sentence, excluding the word "the". If you enter a dot at the end of the sentence, make sure to remove it (you can use trim())

Note: First try running the "original" program. (Just type it in your editor!)

See what the intended output is. The rewrite it by using a List Comprehension.

```
sentence = input("Enter a sentence: ")
words = sentence.strip(".").split()
word_lengths = []
for word in words:
    if word.upper() != "THE":
        word_lengths.append(len(word))

print("Lengths of words found (Other than 'The'):", word_lengths)
```