CSC108 FSG

Term Test 1

Wed. 2-3pm MN2266

Intro & Ice Breaker

Introduce yourself to others…

- ❏ Name
- ❏ How prepared are you for the Term test
- ❏ What you want to get out of the FSGs

Activity 1

Solve Q5 in Extra Refactoring question posted on Quercus
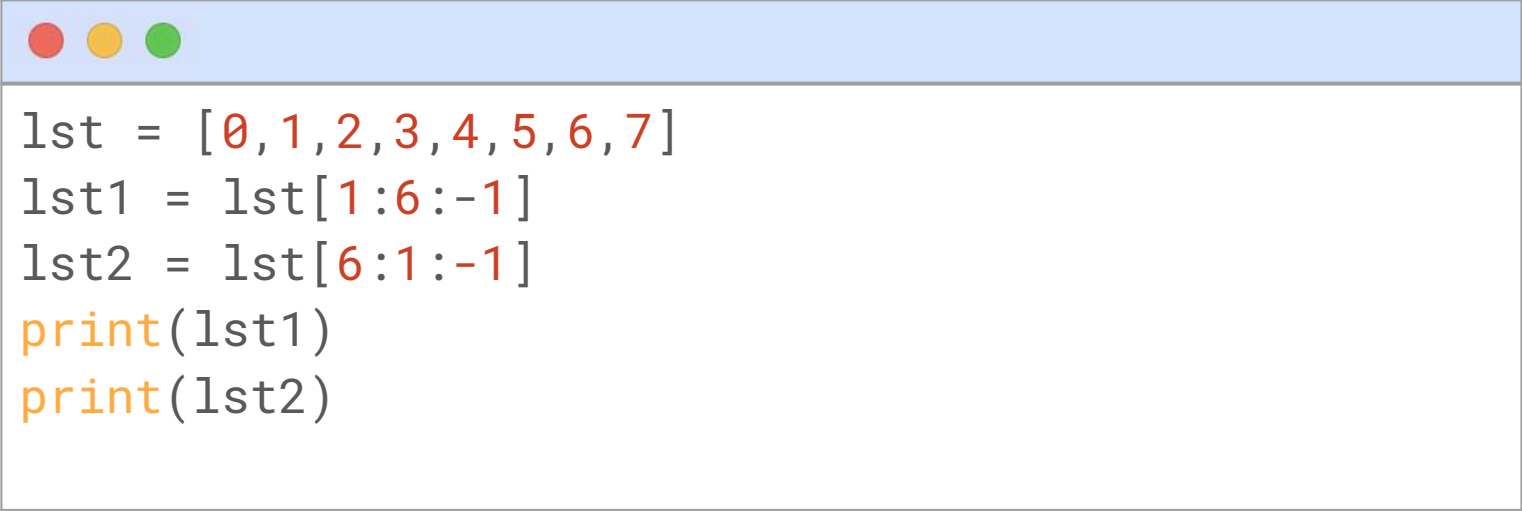
Activity 1

Write a function `even_odd_diff` that takes integer and returns the difference between the sum of even digits and the sum of odd digits

```
even_odd_diff(1234)
>> 2 // since (2 + 4) - (1 + 3) = 2

even_odd_diff(108)
>>-9 // since (0) - (1 + 8) = - 9


 def even_odd_diff(number: int) -> int:
```

Activity 1

```
lst = [0,1,2,3,4,5,6,7]
lst1 = lst[1:6:-1]
lst2 = lst[6:1:-1]
print(lst1)
print(lst2)
```

Question : What happens to `lst1` after the above code executes? and Why?

Activity 2

Write a function that checks if a given word consists only of alphabetic characters, as well as the special characters '-', '_', and '/'. The function should return `True` if the word meets these criteria and `False` otherwise.

```
is_valid_word("hello_word")

>> True

is_valid_word("csc108")

>> False

def is_valid_word(word: str) -> Bool:
```
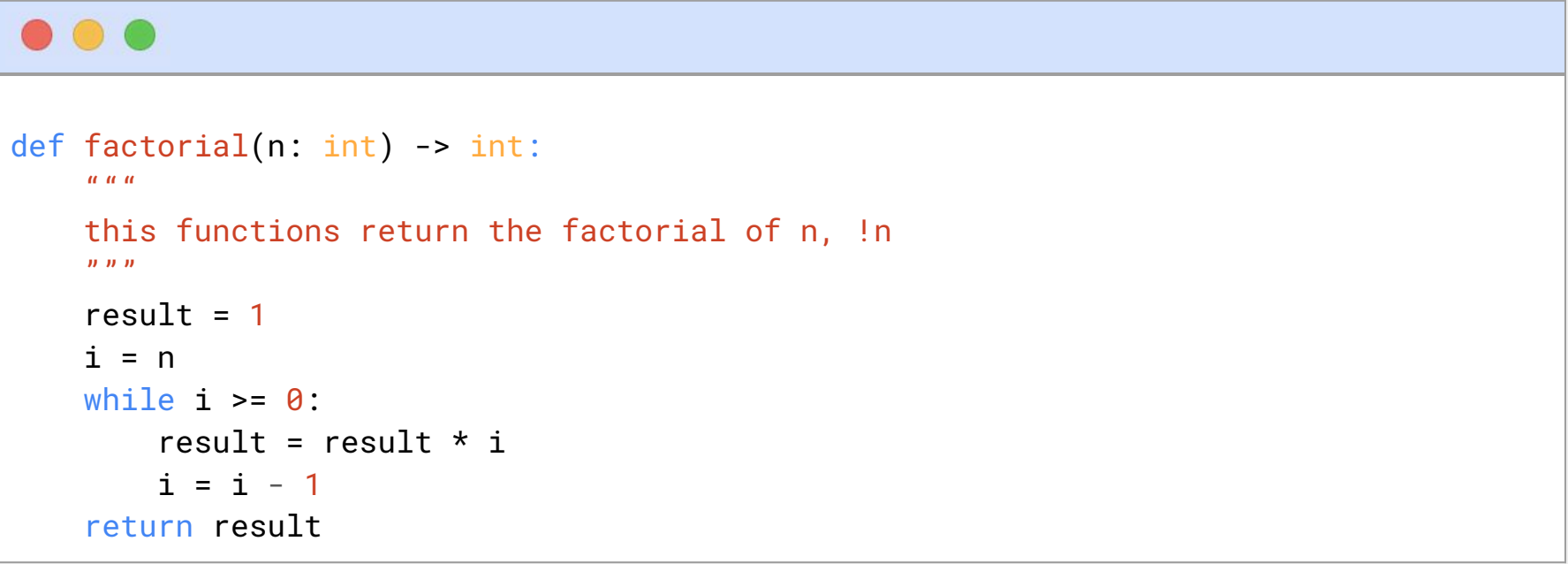
Activity 2

```
"""

Write a function find_longest_word() that takes a sentence as input and
returns the longest word in that sentence. If there are multiple words of the
same maximum length, return the first one encountered.

>>> find_longest_word("Hello world!")
"Hello"
>>> find_longest_word("My name is !@#$%^&*()")
"name"
"""

import random // use randint() to generate number
def find_longest_word(sentence: str) -> str:
    // use isalnum() to check alphanumeric
    // use split() to split the sentence

     ...
```

Activity 3

```python
def factorial(n: int) -> int:
    """
    this functions return the factorial of n, !n
    """
    result = 1
    i = n
    while i >= 0:
        result = result * i
        i = i - 1
    return result
```

Question : Locate the error in the code and come up with a fix.