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In [1]: 1. Write a program that prints the integers from 1 to 100. But for multiples of three print
"Fizz" instead of the number, and for the multiples of five print "Buzz". For numbers which
are multiples of both three and five print "FizzBuzz".

for fizzbuzz in range(101):
    if fizzbuzz % 3 == 0 and fizzbuzz % 5 == 0:
        print("fizzbuzz")
        continue
    elif fizzbuzz % 3 == 0:
        print("fizz")
        continue
    elif fizzbuzz % 5 == 0:
        print("buzz")
        continue
    print(fizzbuzz)

fizzbuzz
1
2
fizz
4
buzz
fizz
7
8
fizz
buzz
11
fizz
13
14
fizzbuzz
16
17
fizz
19
buzz
fizz
22
23
fizz
buzz
26
fizz
28
29
fizzbuzz
31
32
fizz
34
buzz
fizz
37
38
fizz
buzz
41
fizz
43
44
fizzbuzz
46
47
fizz
49
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fizzbuzz
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62
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64
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67
68
fizz
buzz
71
fizz
73
74
fizzbuzz
76
77
fizz
79
buzz
fizz
82
83
fizz
buzz
86
fizz
88
89
fizzbuzz
91
92
fizz
94
buzz
fizz
97
98
fizz
buzz
```

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In [4]: 2. Write a Python program to remove consecutive duplicates from list.
from itertools import groupby
def compress(l_nums):
    return [key for key, group in groupby(l_nums)]
n_list = [0, 0, 1, 2, 2, 3, 4, 4, 5, 4 , 6, 6, 7, 8, 9 , 4, 4 ]
print("Original list:")
print(n_list)
print("\nAfter removing consecutive duplicates:")
print(compress(n_list))

Original list:
[0, 0, 1, 2, 2, 3, 4, 4, 5, 4, 6, 6, 7, 8, 9, 4, 4]

After removing consecutive duplicates:
[0, 1, 2, 3, 4, 5, 4, 6, 7, 8, 9, 4]
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In [5]: 3. Write a python program to find unique element from a list.
def unique_list(l):
    x = []
    for a in l:
        if a not in x:
            x.append(a)
    return x

print(unique_list([1,2,2,3,4,4,4,5,5,5]))

[1, 2, 3, 4, 5]
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In [6]: 4. Write a function that checks whether a number is in a given range (inclusive of high and l
ow)
def test_range(n):
    if n in range(6,10):
        print( " %s is in the range"%str(n))
    else :
        print("The number is outside the given range.")
test_range(9)

9 is in the range
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In [17]: 5. Write a Python function that accepts a string and calculates the number of upper case lett
ers and lower case letters. Sample String : 'Hello Mr. Rogers, how are you this fine Tuesda
y?' Expected Output : No. of Upper case characters : 4 No. of Lower case Characters : 33
HINT: Two string methods that might prove useful .isupper() and .islower()

def string_test(s):
    d={"UPPER_CASE":0, "LOWER_CASE":0}
    for c in s:
        if c.isupper():
            d["UPPER_CASE"]+=1
        elif c.islower():
            d["LOWER_CASE"]+=1
        else:
            pass
    print ("Original String : ", s)
    print ("No. of Upper case characters : ", d["UPPER_CASE"])
    print ("No. of Lower case Characters : ", d["LOWER_CASE"])

string_test('Hello Mr.Rogers,how are you this fine Tuesday')

Original String : Hello Mr.Rogers,how are you this fine Tuesday
No. of Upper case characters : 4
No. of Lower case Characters : 33
```

In []:

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