1. def filter\_list(list):

out\_string = []

for ele in list:

if type(ele) == int and ele >= 0:

out\_string.append(ele)

return out\_string

print(f'➞ {filter\_list([1, 2, "a", "b"])}')

print(f'➞ {filter\_list([1, "a", "b", 0, 15])}')

print(f'➞ {filter\_list([1, 2, "aasf", "1", "123", 123])}')

Output:

➞ [1, 2]

➞ [1, 0, 15]

➞ [1, 2, 123]

1. def reverse(in\_string):

print(f'{in\_string} ➞ {in\_string[::-1].swapcase()}')

reverse('Hello World')

reverse("ReVeRsE")

reverse("Radar")

Output:

Hello World ➞ DLROw OLLEh

ReVeRsE ➞ eSrEvEr

Radar ➞ RADAr

1. first, \*middle, last = [1,2,3,4,5,6]

print(f'first ➞ {first}')

print(f'middle ➞ {middle}')

print(f'last ➞ {last}')

Output:

first ➞ 1

middle ➞ [2, 3, 4, 5]

last ➞ 6

1. def factorial(n):

if n==0:

return 1

return n \* factorial(n-1)

print(f'factorial(5) ➞ {factorial(5)}')

print(f'factorial(3) ➞ {factorial(3)}')

print(f'factorial(1) ➞ {factorial(1)}')

print(f'factorial(0) ➞ {factorial(0)}')

Output:

factorial(5) ➞ 120

factorial(3) ➞ 6

factorial(1) ➞ 1

factorial(0) ➞ 1

1. def move\_to\_end(list,num):

first\_end = []

second\_end = []

for ele in list:

if ele == num:

second\_end.append(ele)

else:

first\_end.append(ele)

first\_end.extend(second\_end)

return first\_end

print(f'move\_to\_end([1, 3, 2, 4, 4, 1], 1) ➞ {move\_to\_end([1, 3, 2, 4, 4, 1], 1)}')

print(f'move\_to\_end([7, 8, 9, 1, 2, 3, 4], 9) ➞ {move\_to\_end([7, 8, 9, 1, 2, 3, 4], 9)}')

print(f'move\_to\_end(["a", "a", "a", "b"], "a") ➞ {move\_to\_end(["a", "a", "a", "b"], "a")}')

Output:

move\_to\_end([1, 3, 2, 4, 4, 1], 1) ➞ [3, 2, 4, 4, 1, 1]

move\_to\_end([7, 8, 9, 1, 2, 3, 4], 9) ➞ [7, 8, 1, 2, 3, 4, 9]

move\_to\_end(["a", "a", "a", "b"], "a") ➞ ['b', 'a', 'a', 'a']