

# Python Remediation Exercises

# (Solutions)

## Generic Mission: Strings or numbers?

#!/usr/bin/python3

strnums = ["1","2","505","what","1","ok","505","just","example","just"]

#1

c\_str = 0

c\_num = 0

for i in strnums:

    if i.isdigit():

        c\_num += 1

    else:

        c\_str += 1

print(f'Strings: {c\_str}\nNumbers: {c\_num}')

#2

print(list(set(strnums)))

#3

max = 0

for i in strnums:

    if i.isdigit():

        if int(i) > max:

            max = int(i)

print(f"The highest number is: {max}")

#4,#5

new\_dict = {}

for i in strnums:

    if i.isdigit():

        new\_dict[i] = int(i)\*\*2

for k,v in new\_dict.items():

    print(f"{k} squared equal {v}")

## Mission 1: Case Study

#1

def same\_case(a, b):

    return a.isupper() == b.isupper() if a.isalpha() and b.isalpha() else -1

#2

def same\_case(a, b):

    if a.isalpha() and b.isalpha():

        if (a.islower() and b.islower()) or (a.isupper() and b.isupper()):

            return 1

        else:

            return 0

    else:

        return -1

## Mission 2: Closest elevator

#1

def elevator(left, right, call):

    return "left" if abs(call - left) < abs(call - right) else "right"

#2

def elevator(left, right, call):

    if abs(left-call) >= abs(right-call):

        return "right"

    else:

        return "left"

## Mission 3: A wolf in sheep's clothing

#1

def warn\_the\_sheep(queue):

    i = queue[::-1].index('wolf')

    if i == 0:

        return 'Pls go away and stop eating my sheep'

    return f'Oi! Sheep number {i}! You are about to be eaten by a wolf!'

#2

def warn\_the\_sheep(queue):

    queue.reverse()

    wolfnum = queue.index("wolf")

    if wolfnum == 0:

        return "Pls go away and stop eating my sheep"

    else:

        return f"Oi! Sheep number {wolfnum}! You are about to be eaten by a wolf!"

## Mission 4: Our Champions

#1

def points(a):

    return sum((x >= y) + 2 \* (x > y) for x, y in (s.split(":") for s in a))

#2

def points(test\_case):

    total = 0

    for test in test\_case:

        x,y = test.split(':')

        if x > y and x != y:

            total += 3

        else:

            total += 1

    return total