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**Tareq alazzeh**

Assignment #1

Q1

def convert\_indian\_to\_arabic(indian\_number):

numeral\_map = {

'٠': '0',

'١': '1',

'٢': '2',

'٣': '3',

'٤': '4',

'٥': '5',

'٦': '6',

'٧': '7',

'٨': '8',

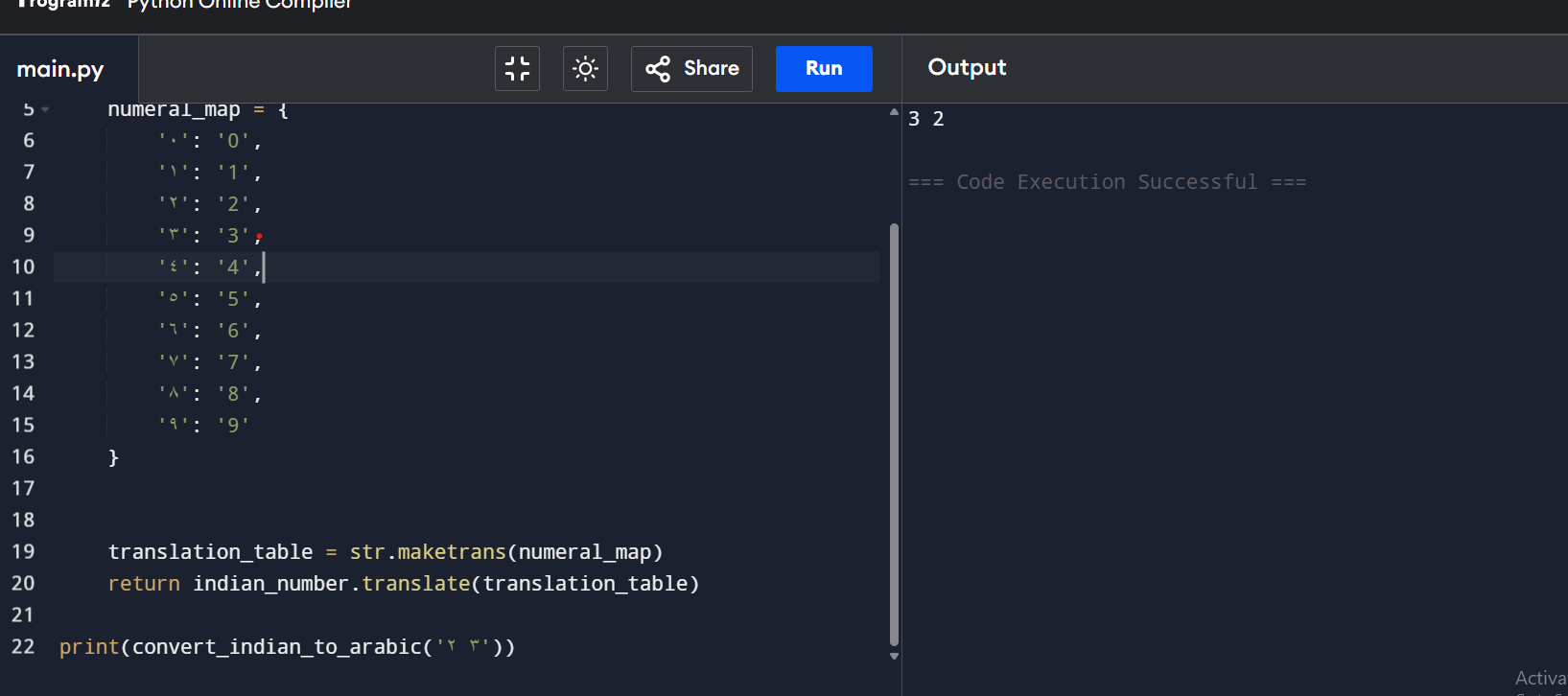
'٩': '9'

}

translation\_table = str.maketrans(numeral\_map)

return indian\_number.translate(translation\_table)

print(convert\_indian\_to\_arabic('٣ ٢'))



Q 2

import numpy as np

import random

def calculate\_standard\_deviation(N):

numbers = [random.randint(1, 10) for \_ in range(N)]

np\_numbers = np.array(numbers)

count = len(numbers)

total\_sum = sum(numbers)

minimum = min(numbers)

maximum = max(numbers)

range\_value = maximum - minimum

median = np.median(np\_numbers)

unique\_values, counts = np.unique(np\_numbers, return\_counts=True)

mode = unique\_values[np.argmax(counts)]

mean = total\_sum / count

variance = np.sum((np\_numbers - mean) \*\* 2) / count

std\_dev = np.sqrt(variance)

return (

numbers,

count,

total\_sum,

minimum,

maximum,

range\_value,

median,

mode,

mean,

variance,

std\_dev

)

def display\_results(N):

results = calculate\_standard\_deviation(N)

numbers, count, total\_sum, minimum, maximum, range\_value, median, mode, mean, variance, std\_dev = results

print(f"Numbers: {numbers}")

print(f"Count (N): {count}")

print(f"Sum: {total\_sum}")

print(f"Min: {minimum}")

print(f"Max: {maximum}")

print(f"Range: {range\_value}")

print(f"Median: {median}")

print(f"Mode: {mode}")

print(f"Mean: {mean:.3f}")

print(f"Variance: {variance:.3f}")

print(f"Standard Deviation: {std\_dev:.3f}")

display\_results(6)

