**Numpy Assignment**

**Problem Statement:**

You work in XYZ Company as a Python. The company officials want you to build a python program.

Tasks to be performed:

1. 1. Create a function that takes dimensions as tuples e.g.(3, 3) and a numeric value and returns a numpy array of the given dimension filled with the given value e.g.: solve((3, 3), 5) will return

[

[5, 5, 5],

[5, 5, 5],

[5, 5, 5]

]

1. Create a method that takes n numpy arrays of same dimensions sums them and return the answer.
2. Given a 2 D Array of N X M Dimesion, Write a function that accepts this array as well as two numbers N and M. The method should return the top-left N X M sub matrix e.g:

[

[1, 2, 3],

[4, 5, 6],

[7, 8, 9],

]

top\_left\_sub\_matrix(matrix, 2, 2) -> should return :

[

[1, 2]

[4, 5]

]

1. Given a 2 D Array of N X M Dimesion, Write a function that accepts this array as well as two numbers N and M The method should return the bottom-right N X M sub matrix e.g:

[

[1, 2, 3],

[4, 5, 6],

[7, 8, 9],

]

sub\_matrix(matrix, 1, 1) -> should return : (Keep in mind these arrays are zero indexed)

[

[5, 6]

[8, 9]

]

1. Given a 1 D Numpy Array. Write a function that accepts this array as parameters. The method should return a dictionary with 'mean' and 'std\_dev' as key and array's mean and array's standard deviation as values:

[1, 1, 1]

solution(arr) -> should return :

{'mean': 1.0, 'std\_dev': 0.0}