Question 1

Numpy.

* Write a NumPy program to create a 3x3x3 ndarray filled with values between 1 and 27.
* Write a NumPy program to compute sum of all elements, sum of each column and sum of each row of a given array
* Write a NumPy program to create a 2-D array whose diagonal equals [4, 5, 6, 8] and 0's elsewhere.
* Write a NumPy program that creates below array with 1 on the border and 0 inside. Example:

[[1. 1. 1. 1. 1.]

[1. 0. 0. 0. 1.]

[1. 0. 0. 0. 1.]

[1. 0. 0. 0. 1.]

[1. 1. 1. 1. 1.]]

* Write a program that creates array1 and then write a program that extracts (slice) array2 from array1.

array1

array([[ 1, 2, 3, 4, 5],

[ 6, 7, 8, 9, 10],

[11, 12, 13, 14, 15],

[16, 17, 18, 19, 20],

[21, 22, 23, 24, 25]])

array2

array([[12, 13, 14, 15],

[17, 18, 19, 20],

[22, 23, 24, 25]])

Question 2.

Pandas.

Attached is a CSV that contains Covid19 statistics for 04/26/2020. This data is from data repository for the 2019 Novel Coronavirus Visual Dashboard operated by the Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE). <https://github.com/CSSEGISandData/COVID-19>

Perform the following tasks for this dataset:

1. Write a program to get the latest number of confirmed, deaths, recovered and active cases of Novel Coronavirus (COVID-19) Country wise.
2. Write a program to get the USA state wise cases of confirmed, deaths and recovered cases of Novel Coronavirus (COVID-19)
3. Write a program to list countries with no cases of Novel Coronavirus (COVID-19) recovered.
4. Write a program to list countries with all cases of Novel Coronavirus (COVID-19) recovered.
5. Write a program to get the top 10 countries data (Last Update, Country/Region, Confirmed, Deaths, Recovered) of Novel Coronavirus (COVID-19)