

Group Activity

Your team is tasked with writing the six programs that will solve the following problems. Once you have completed (written and tested) all the problems, raise your hand and notify a peer TA.

1. Write a Python program utilizing numpy to find the set difference of two arrays. The set difference will return the sorted, unique values in array1 that are not in array2.

Expected Input:

Array1: [0 10 20 40 60 80]

Array2: [10, 30, 40, 50, 70, 90]

Expected Output:

Set difference between two arrays:

[0 20 60 80].

2. Write a Python program utilizing numpy to find the indices of the maximum and minimum values along the given axis of an array. Go to the editor

Original array:

```
array([[ 10,  9,  0, 13,  2],
```

```
       [ 5,  3,  7,  8,  1],
```

```
       [10, 11, 12, 13, 14]])
```

Expected Output:

The Maximum Value of 14 is located on row 3 column 5

The Minimum Value of 0 is located on row 1 column 3

3. Write a Python program to count the frequency of a user inputted string in a file.
Load file: un.txt
4. Write a Python program to find common words between two documents.
Load file: un.txt doi.txt
5. Write a program to plot the temperature data for two different cities loaded from separate files. The data is formatted as follows: month day year temp. Your plot should use different color markers for each cities. Do not use lines.
Load file: TXHOUSTO.txt MABOSTON.txt
6. Using the data files from above, merge the results into a new data file called cities_temp.txt. The data is formatted as follows: month day year tempHouston tempBoston.