Lab 8 - Arrays

SUBMIT original code in Python to solve the problem below.

Please be aware that copying and pasting code from any other source other than code you have explicitly written on your own is considered plagiarism. If you receive help, that is fine (document help in the comments of your code) however you need to write your own code, name your own variables, and comment your own code. Students turning in the exact same work as another student will all be given zeros. Plagiarism is not tolerated, and students found to be plagiarizing will be given a zero and reported to the University with the possibility of termination of the class and degree program.

Write a program that will combine two integer arrays into one larger array and remove any duplicate values.

Prompt the user for a number *N*, (*N* will be a positive integer greater than 1). Create two arrays each with *N* elements. Populate both arrays with random numbers between 0 and 500. Combine the two arrays into a third array making sure that only distinct values are added. I.e. if the number '65' exists in both arrays, only one instance of it will be added to the third array.

Test your program with an *N* value of:

- 10
- 25
- 50

Input:
N: ***25***

Output:
The contents of the final array, one number per line.

Bonus challenge (optional):
Sort the final array using any method *other* than the `array.sort()` method.

Save your program as Lab8.py and upload just your source file to the appropriate dropbox in GradeScope, ***NOT D2L!***

REMEMBER

- Include the comment heading at the top of your code.
  - `# Program Name: Lab1.py (use the name the program is saved as)`
  - `# Course: IT1114/Section XXX`
  - `# Student Name: John Doe`
  - `# Assignment Number: Lab#`
  - `# Due Date: xx/xx/ 20XX`
  - `# Purpose: What does the program do (in a few sentences)?`
  - `# List specific resources used to complete the assignment.`

- Place comments within your code explaining the programming segments
- Submit the .py file and a screen shot of the output.