Array Assignments.

1. Write the code for the following problem. Assign 10 last names to an array. Write a function to display the names. Write another function to display the names in reverse order.

Jones Smith Ball Baker Martin Reed Farmer Meyer Burton Mills

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| Inputs | Outputs | Process |
|  |  |  |
| lastn | def displaynames(lastn):  for i in lastn:  print (i)      def displayr(lastn):  l = len(lastn)  print("Arrays in Reverse Order")  for i in range (l-1,-1,-1):  print(lastn[i]) |  |
| f = open("lastname.txt", "r") | lastn = []    lastname = f.readline()    while lastname != "":  lastn.append(str(lastname).rstrip("\n"))    lastname = f.readline()    f.close() |  |
|  |  | print("Arrays in Order")  displaynames(lastn)  displayr(lastn) |
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1. Write the code for the following problem. Add another array to problem 1 above. This array should contain exam score for the respective students. That is, the first name goes with the first score etc. These are called parallel arrays. Also modify the display functions to include exam score array in addition to the last name array.

Lastname = Jones Smith Ball Baker Martin Reed Farmer Meyer Burton Mills

Score= 100 85 70 89 95 91 78 81 65 68

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| Inputs | Outputs | Process |
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| Lastn  score | def displaynames(lastn,score):  l = len(lastn)  for x in range(0,l,1):  print(x," ",lastn[x]," ", score[x]) |  |
| f = open("lastname.txt", "r") | f = open("lastname.txt", "r")    lastn = []  score = []    lastname = f.readline()    while lastname != "":  lastn.append(str(lastname).rstrip("\n"))  s = float(f.readline())  score.append(s)  lastname = f.readline()    f.close() |  |
|  |  | print("Test Scores in Order")  displaynames(lastn,score) |
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1. Write the code for the following problem. The data to load is lastname and score. You can do this from a file. Add a function to problem to display the last name and highest, last name and lowest. Hint: for highest initialize a variable to 0 (high\_var). If the array value is higher than the high\_var then set high\_var to the array value and set high\_index to the position of the array. Proceed through the array until you get to the end. Do the same for finding the lowest using low\_var set to 999 (higher than the highest value).

Lastname = Jones Smith Ball Baker Martin Reed Farmer Meyer Burton Mills

Score= 100 85 70 89 95 91 78 81 65 68

Hiscore = 100 hiindex = -1.0

Lowscore = 65 lowindex = 99999999

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| Inputs | Outputs | Process |
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| Lastn  score | def hilow(lastn,score):  l = len(lastn)  hiscore = -1  lowscore = 99999999  for y in range (0,l,1):  if float(score[y]) > float (hiscore):  hiindex = y  hiscore = score[y]    if float(score[y]) < float(lowscore):  loindex = y  lowscore = score[y]    print("Highest Score", lastn[hiindex], score[hiindex])  print("Lowest Score", lastn[loindex], score[loindex] ) |  |
| f = open("lastname.txt", "r") | lastname = f.readline()  lastn = []  score = []    while lastname != "":  lastn.append(str(lastname).rstrip("\n"))  s = float(f.readline())  score.append(s)  lastname = f.readline()    f.close |  |
|  |  | hilow(lastn, score) |
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1. Load list of 10 Player Names and Batting Averages from a file into arrays. (Create your own file with two items: player last name and batting average, i.e. 0.267, 0.300 etc). Write a function to display the arrays. Then use a while loop to repeatedly ask the user for a last name. Write another function to search for the last name in the array and then display last name and batting average when found.

Lastname = Jones Smith Ball Baker Martin Reed Farmer Meyer Burton Mills

Avg= .450 .271 .153 .250 .343 .170 .300 .359 .289 .189

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| Inputs | Outputs | Process |
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| Lastn  Avg  sname | def seqsearch(lastn,sname):  l = len(lastn)  i = -1  for y in range (0,l,1):  if lastn[y] == sname:  i = y    return i |  |
| f = open("lastname.txt", "r") | lastn = []  score = []    lastname = f.readline()    while lastname != "":  lastn.append(str(lastname).rstrip("\n"))  s = float(f.readline())  score.append(s)  lastname = f.readline()    f.close() |  |
| response = input("Do you want to use this Program? Yes or No?") |  | while response == "Yes":  sname = input("Enter Last Name of Batter to search for")  i = seqsearch(lastn, sname)  if i == -1:  print(sname, " not in the Array")  else:  print(lastn[i], " Batting Average of ", score[i])    response = input("Do you want to use this Program? Yes or No?") |
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1. Modify 4 above to display a message, “Name not found” when the name is not in the list.

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| Inputs | Outputs | Process |
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| Lastn  Avg  sname | def seqsearch(lastn,sname):  l = len(lastn)  i = -1  for y in range (0,l,1):  if lastn[y] == sname:  i = y    return i |  |
| f = open("lastname.txt", "r") | lastn = []  score = []    lastname = f.readline()    while lastname != "":  lastn.append(str(lastname).rstrip("\n"))  s = float(f.readline())  score.append(s)  lastname = f.readline()    f.close() |  |
| response = input("Do you want to use this Program? Yes or No?") |  | while response == "Yes":  sname = input("Enter Last Name of Batter to search for")  i = seqsearch(lastn, sname)  if i == -1:  print(sname, " Name not Found")  else:  print(lastn[i], " Batting Average of ", score[i])    response = input("Do you want to use this Program? Yes or No?") |
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