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All students are requested to slove the following Questions

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202. Write a Python program to find the indexes of all None items in a given list.

Original list:

[1, None, 5, 4, None, 0, None, None]

Indexes of all None items of the list:

[1, 4, 6, 7]

203. Write a Python program to join adjacent members of a given list.

Original list:

['1', '2', '3', '4', '5', '6', '7', '8']

Join adjacent members of a given list:

['12', '34', '56', '78']

Original list:

['1', '2', '3']

Join adjacent members of a given list:

['12']

204. Write a Python program to check if first digit/character of each element in a given list is same or not.

Original list:

[1234, 122, 1984, 19372, 100]

Check if first digit in each element of the said given list is same or not!

True

Original list:

[1234, 922, 1984, 19372, 100]

Check if first digit in each element of the said given list is same or not!

False

Original list:

['aabc', 'abc', 'ab', 'a']

Check if first character in each element of the said given list is same or not!

True

Original list:

['aabc', 'abc', 'ab', 'ha']

Check if first character in each element of the said given list is same or not!

False

205. Write a Python program to find the indices of elements of a given list, greater than a specified value.

Original list:

[1234, 1522, 1984, 19372, 1000, 2342, 7626]

Indices of elements of the said list, greater than 3000

[3, 6]

Original list:

[1234, 1522, 1984, 19372, 1000, 2342, 7626]

Indices of elements of the said list, greater than 20000

[]

206. Write a Python program to remove additional spaces in a given list.

Original list:

['abc ', ' ', ' ', 'sdfds ', ' ', ' ', 'sdfds ', 'huy']

Remove additional spaces from the said list:

['abc', '', '', 'sdfds', '', '', 'sdfds', 'huy']

207. Write a Python program to find the common tuples between two given lists.

Original lists:

[('red', 'green'), ('black', 'white'), ('orange', 'pink')]

[('red', 'green'), ('orange', 'pink')]

Common tuples between two said lists

[('orange', 'pink'), ('red', 'green')]

Original lists:

[('red', 'green'), ('orange', 'pink')]

[('red', 'green'), ('black', 'white'), ('orange', 'pink')]

Common tuples between two said lists

[('orange', 'pink'), ('red', 'green')]

208. Sum a list of numbers. Write a Python program to sum the first number with the second and divide it by 2, then sum the second with the third and divide by 2, and so on.

Original list:

[1, 2, 3, 4, 5, 6, 7]

Sum the said list of numbers:

[1.5, 2.5, 3.5, 4.5, 5.5, 6.5]

Original list:

[0, 1, -3, 3, 7, -5, 6, 7, 11]

Sum the said list of numbers:

[0.5, -1.0, 0.0, 5.0, 1.0, 0.5, 6.5, 9.0]

209. Write a Python program to count the number of groups of non-zero numbers separated by zeros of a given list of numbers.

Original list:

[3, 4, 6, 2, 0, 0, 0, 0, 0, 0, 6, 7, 6, 9, 10, 0, 0, 0, 0, 0, 5, 9, 9, 7, 4, 4, 0, 0, 0, 0, 0, 0, 5, 3, 2, 9, 7, 1]

Number of groups of non-zero numbers separated by zeros of the said list: 4

210. Write a Python program to compute the sum of non-zero groups (separated by zeros) of a given list of numbers.

Original list:

[3, 4, 6, 2, 0, 0, 0, 0, 0, 0, 6, 7, 6, 9, 10, 0, 0, 0, 0, 0, 7, 4, 4, 0, 0, 0, 0, 0, 0, 5, 3, 2, 9, 7, 1, 0, 0, 0]

Compute the sum of non-zero groups (separated by zeros) of the said list of numbers: [15, 38, 15, 27]

211. Write a Python program to remove an element from a given list.

Original list:

['Guido Van Rossum', 98, 'Math', 90, 'Science']

After deleting an element:, using index of the element: [98, 'Math', 90, 'Science']

212. Write a Python program to remove all the values except integer values from a given array of mixed values.

Original list: [34.67, 12, -94.89, 'Python', 0, 'C#']

After removing all the values except integer values from the said array of mixed values: [12, 0]

213. Write a Python program to calculate the sum of two lowest negative numbers of a given array of integers.

Original list elements: [-14, 15, -10, -11, -12, -13, 16, 17, 18, 19, 20]

Sum of two lowest negative numbers of the said array of integers: -27

Original list elements: [-4, 5, -2, 0, 3, -1, 4, 9]

Sum of two lowest negative numbers of the said array of integers: -6

214. Write a Python program to sort a given positive number in descending/ascending order.

Descending -> Highest to lowest.

Ascending -> Lowest to highest

Original Number: 134543

Descending order of the said number: 544331

Ascending order of the said number: 133445

Original Number: 43750973

Descending order of the said number: 97754330

Ascending order of the said number: 3345779

215. Write a Python program to merge two or more lists into a list of lists, combining elements from each of the input lists based on their positions.

Sample Output:

After merging lists into a list of lists:

[['a', 1, True], ['b', 2, False]]

[['a', 1, True], [None, 2, False]]

[['a', 1, True], ['\_', 2, False]]

216. Write a Python program to group the elements of a list based on the given function and returns the count of elements in each group.

Sample Output:

{6: 2, 4: 1}

{3: 2, 5: 1}

217. Write a Python program to split values into two groups, based on the result of the given filtering function.

Sample Output:

[['white'], ['red', 'green', 'black']]

218. Write a Python program to sort one list based on another list containing the desired indexes.

Sample Output:

['apples', 'bread', 'eggs', 'jam', 'milk', 'oranges']

['oranges', 'milk', 'jam', 'eggs', 'bread', 'apples']

219. Write a Python program to build a list, using an iterator function and an initial seed value.

Sample Output:

[-10, -20, -30, -40]

220. Write a Python program to map the values of a list to a dictionary using a function, where the key-value pairs consist of the original value as the key and the result of the function as the value.

Sample Output:

{1: 1, 2: 4, 3: 9}

221. Write a Python program to randomize the order of the values of an list, returning a new list.

Sample Output:

Original list: [1, 2, 3, 4, 5, 6]

Shuffle the elements of the said list:

[3, 2, 4, 1, 6, 5]

222. Write a Python program to get the difference between two given lists, after applying the provided function to each list element of both.

Sample Output:

[1.2]

[{'x': 2}]

223. Write a Python program to create a list with the non-unique values filtered out.

Sample Output:

[1, 3, 5]

224. Write a Python program to create a list with the unique values filtered out.

Sample Output:

[2, 4]

225. Write a Python program to retrieve the value of the nested key indicated by the given selector list from a dictionary or list.

Sample Output:

Harwood

2

226. Write a Python program to get a list of elements that exist in both lists, after applying the provided function to each list element of both.

Sample Output:

[2.1]

227. Write a Python program to get the symmetric difference between two lists, after applying the provided function to each list element of both.

Sample Output:

[1.2, 3.4]

228. Write a Python program to get every element that exists in any of the two given lists once, after applying the provided function to each element of both.

Sample Output:

[2.2, 4.1]

229. Write a Python program to find the index of the first element in the given list that satisfies the provided testing function.

Sample Output:

0

230. Write a Python program to find the indexes of all elements in the given list that satisfy the provided testing function.

Sample Output:

[0, 2]

231. Write a Python program to split values into two groups, based on the result of the given filter list.

Sample Output:

[['red', 'green', 'pink'], ['blue']]

232. Write a Python program to chunk a given list into smaller lists of a specified size.

Sample Output:

[[1, 2, 3], [4, 5, 6], [7, 8]]

233. Write a Python program to chunk a given list into n smaller lists.

Sample Output:

[[1, 2], [3, 4], [5, 6], [7]]

234. Write a Python program to convert a given number (integer) to a list of digits.

Sample Output:

[1, 2, 3]

[1, 3, 4, 7, 8, 2, 3]

235. Write a Python program to find the index of the last element in the given list that satisfies the provided testing function.

Sample Output:

2

236. Write a Python program to find the items that are parity outliers in a given list.

Sample Output:

[1, 3]

[2, 4, 6]

237. Write a Python program to convert a given list of dictionaries into a list of values corresponding to the specified key.

Sample Output:

[8, 36, 34, 10]

238. Write a Python program to calculate the average of a given list, after mapping each element to a value using the provided function.

Sample Output:

5.0

15.0

239. Write a Python program to find the value of the first element in the given list that satisfies the provided testing function.

Sample Output:

1

2

240. Write a Python program to find the value of the last element in the given list that satisfies the provided testing function.

Sample Output:

3

4

241. Write a Python program to create a dictionary with the unique values of a given list as keys and their frequencies as the values.

Sample Output:

{'a': 4, 'b': 2, 'f': 2, 'c': 1, 'e': 2}

{3: 4, 4: 2, 7: 1, 5: 2, 9: 1, 0: 1, 2: 1}

242. Write a Python program to get the symmetric difference between two iterables, without filtering out duplicate values.

Sample Output:

[30, 40]

243. Write a Python program to check if a given function returns True for every element in a list.

Sample Output:

True

False

False

244. Write a Python program to initialize a list containing the numbers in the specified range where start and end are inclusive and the ratio between two terms is step. Returns an error if step equals 1.

Sample Output:

[1, 2, 4, 8, 16, 32, 64, 128, 256]

[3, 6, 12, 24, 48, 96, 192]

[1, 4, 16, 64, 256]

245. Write a Python program to that takes any number of iterable objects or objects with a length property and returns the longest one.

Sample Output:

Green

[1, 2, 3, 4, 5]

[1, 2, 3, 4]

246. Write a Python program to check if a given function returns True for at least one element in the list.

Sample Output:

True

False

247. Write a Python program to calculate the difference between two iterables, without filtering duplicate values.

Sample Output:

[3]

248. Write a Python program to get the maximum value of a list, after mapping each element to a value using a given function.

Sample Output:

8

249. Write a Python program to get the minimum value of a list, after mapping each element to a value using a given function.

Sample Output:

2

250. Write a Python program to calculate the sum of a list, after mapping each element to a value using the provided function.

Sample Output:

20

251. Write a Python program to initialize and fills a list with the specified value.

Sample Output:

[0, 0, 0, 0, 0, 0, 0]

[3, 3, 3, 3, 3, 3, 3, 3]

[-2, -2, -2, -2, -2]

[3.2, 3.2, 3.2, 3.2, 3.2]

252. Write a Python program to get the n maximum elements from a given list of numbers.

Sample Output:

Original list elements:

[1, 2, 3]

Maximum values of the said list: [3]

Original list elements:

[1, 2, 3]

Two maximum values of the said list: [3, 2]

Original list elements:

[-2, -3, -1, -2, -4, 0, -5]

Threee maximum values of the said list: [0, -1, -2]

Original list elements:

[2.2, 2, 3.2, 4.5, 4.6, 5.2, 2.9]

Two maximum values of the said list: [5.2, 4.6]

253. Write a Python program to get the n minimum elements from a given list of numbers.

Sample Output:

Original list elements:

[1, 2, 3]

Minimum values of the said list: [1]

Original list elements:

[1, 2, 3]

Two minimum values of the said list: [1, 2]

Original list elements:

[-2, -3, -1, -2, -4, 0, -5]

Threee minimum values of the said list: [-5, -4, -3]

Original list elements:

[2.2, 2, 3.2, 4.5, 4.6, 5.2, 2.9]

Two minimum values of the said list: [2, 2.2]

254. Write a Python program to get the weighted average of two or more numbers.

Sample Output:

Original list elements:

[10, 50, 40]

[2, 5, 3]

Weighted average of the said two list of numbers:

39.0

Original list elements:

[82, 90, 76, 83]

[0.2, 0.35, 0.45, 32]

Weighted average of the said two list of numbers:

82.97272727272727

255. Write a Python program to perform a deep flattens a list.

Sample Output:

Original list elements:

[1, [2], [[3], [4], 5], 6]

Deep flatten the said list:

[1, 2, 3, 4, 5, 6]

Original list elements:

[[[1, 2, 3], [4, 5]], 6]

Deep flatten the said list:

[1, 2, 3, 4, 5, 6]

256. Write a Python program to get the powerset of a given iterable.

Sample Output:

Original list elements:

[1, 2]

Powerset of the said list:

[(), (1,), (2,), (1, 2)]

Original list elements:

[1, 2, 3, 4]

Powerset of the said list:

[(), (1,), (2,), (3,), (4,), (1, 2), (1, 3), (1, 4), (2, 3), (2, 4), (3, 4), (1, 2, 3), (1, 2, 4), (1, 3, 4), (2, 3, 4), (1, 2, 3, 4)]

257. Write a Python program to check if two given lists contain the same elements regardless of order.

Sample Output:

Original list elements:

[1, 2, 4]

[2, 4, 1]

Check two said lists contain the same elements regardless of order!

True

Original list elements:

[1, 2, 3]

[1, 2, 3]

Check two said lists contain the same elements regardless of order!

True

Original list elements:

[1, 2, 3]

[1, 2, 4]

Check two said lists contain the same elements regardless of order!

False

258. Write a Python program to create a given flat list of all the keys in a flat dictionary.

Sample Output:

Original directory elements:

{'Laura': 10, 'Spencer': 11, 'Bridget': 9, 'Howard ': 10}

Flat list of all the keys of the said dictionary:

['Laura', 'Spencer', 'Bridget', 'Howard ']

259. Write a Python program to check if a given function returns True for at least one element in the list.

Sample Output:

False

True

False

260. Write a Python program to check if all the elements of a list are included in another given list.

Sample Output:

True

False

261. Write a Python program to get the most frequent element in a given list of numbers.

Sample Output:

2

Original list:

[2, 3, 8, 4, 7, 9, 8, 2, 6, 5, 1, 6, 1, 2, 3, 2, 4, 6, 9, 1, 2]

Item with maximum frequency of the said list:

2

Original list:

[1, 2, 3, 1, 2, 3, 2, 1, 4, 3, 3]

Item with maximum frequency of the said list:

3

262. Write a Python program to move the specified number of elements to the end of the given list.

Sample Output:

[4, 5, 6, 7, 8, 1, 2, 3]

[6, 7, 8, 1, 2, 3, 4, 5]

[1, 2, 3, 4, 5, 6, 7, 8]

[1, 2, 3, 4, 5, 6, 7, 8]

[8, 1, 2, 3, 4, 5, 6, 7]

[2, 3, 4, 5, 6, 7, 8, 1]

263. Write a Python program to move the specified number of elements to the start of the given list.

Sample Output:

[4, 5, 6, 7, 8, 1, 2, 3]

[6, 7, 8, 1, 2, 3, 4, 5]

[1, 2, 3, 4, 5, 6, 7, 8]

[1, 2, 3, 4, 5, 6, 7, 8]

[8, 1, 2, 3, 4, 5, 6, 7]

[2, 3, 4, 5, 6, 7, 8, 1]

264. Write a Python program to create a two-dimensional list from given list of lists.

Sample Output:

[(1, 4, 7, 10), (2, 5, 8, 11), (3, 6, 9, 12)]

[(1, 4), (2, 5)]

265. Write a Python program to generate a list, containing the Fibonacci sequence, up until the nth term.

Sample Output:

First 7 Fibonacci numbers:

[0, 1, 1, 2, 3, 5, 8, 13]

First 15 Fibonacci numbers:

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610]

First 50 Fibonacci numbers:

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181, 6765, 10946, 17711, 28657, 46368, 75025, 121393, 196418, 317811, 514229, 832040, 1346269, 2178309, 3524578, 5702887, 9227465, 14930352, 24157817, 39088169, 63245986, 102334155, 165580141, 267914296, 433494437, 701408733, 1134903170, 1836311903, 2971215073, 4807526976, 7778742049, 12586269025]

266. Write a Python program to cast the provided value as a list if it's not one.

Sample Output:

<class 'list'>

[1]

<class 'tuple'>

['Red', 'Green']

<class 'set'>

['Green', 'Red']

<class 'dict'>

[1, 2, 3]

267. Write a Python program to get the cumulative sum of the elements of a given list.

Sample Output:

Original list elements:

[1, 2, 3, 4]

Cumulative sum of the elements of the said list:

[1, 3, 6, 10]

Original list elements:

[-1, -2, -3, 4]

Cumulative sum of the elements of the said list:

[-1, -3, -6, -2]

268. Write a Python program to get a list with n elements removed from the left, right.

Sample Output:

Original list elements:

[1, 2, 3]

Remove 1 element from left of the said list:

[2, 3]

Remove 1 element from right of the said list:

[1, 2]

Original list elements:

[1, 2, 3, 4]

Remove 2 elements from left of the said list:

[3, 4]

Remove 2 elements from right of the said list:

[1, 2]

Original list elements:

[1, 2, 3, 4, 5, 6]

Remove 7 elements from left of the said list:

[2, 3, 4, 5, 6]

Remove 7 elements from right of the said list:

[1, 2, 3, 4, 5]

269. Write a Python program to get the every nth element in a given list.

Sample Output:

[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

[2, 4, 6, 8, 10]

[5, 10]

[6]

270. Write a Python program to check if the elements of the first list are contained in the second one regardless of order.

Sample Output:

True

True

False

True

271. Write a Python program to check if there are duplicate values in a given flat list.

Sample Output:

Original list:

[1, 2, 3, 4, 5, 6, 7]

Check if there are duplicate values in the said given flat list:

False

Original list:

[1, 2, 3, 3, 4, 5, 5, 6, 7]

Check if there are duplicate values in the said given flat list:

True

272. Write a Python program to generate a list of numbers in the arithmetic progression starting with the given positive integer and up to the specified limit.

Sample Output:

[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]

[3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36]

[5, 10, 15, 20, 25]