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1 # 1. Write a function that takes a List of number and print each number in the
  following way: the value at index 0 is 5
2
3 '''list = [5,3,7,8,9,10]
4
5 def func(list):
6     index = 0
7     for l in list:
8         print(index, l)
9         index+=1
10 func(list)'''
11
12
13 # 2. Write a Python program that finds and returns the minimum value in a
  list of integers.
14 #Example Input: [8, 3, 5, 1, 6]
15 #Example Output: 1
16 '''int = (5,3,7,1,9,4)
17 mini = min(int)
18 print(f"smallest number is {mini}")
19 '''
20
21 #
22
23 '''int = [8,3,5,1,0,-1,6]
24 def min(int):
25     int.sort()
26     print(f"Mininum Value in the list:", int[0])
27
28 min(int)'''
29
30
31 # 3. Write a function that should take a target and the function should create
  a list of 10 numbers that can be divisible by the target.
32 #Ex INPUT : target = 4
33 #Output should be: [8,12,16,20,24 ....]
34 #Explanation: you can see that each number can be divisible by 4.
35
36 '''def table(num):
37     for i in range(1,11):
38         divi = num*i
39         print(divi)
40
41 table(4)
42 '''
43
44 # 4. Write a Python program that merges two lists into one.
45 #Example Input: List 1: [1, 2, 3], List 2: [4, 5, 6]
46 #Example Output: [1, 2, 3, 4, 5, 6]
47
48 '''List_1= [1, 2, 3]
49 List_2= [4, 5, 6]
50 print(List_1 + List_2)'''

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51
52 '''l1 = [1,2,3]
53 l2 = [4,5,6]
54 def joint(l1,l2):
55     joint = l1+l2
56     print(joint)
57 joint(l1,l2)'''
58
59
60 # 5. Write a Python program that finds and returns the largest number from a
61 list of integers.
62 #Example Input: [3, 8, 1, 5, 10]
63 #Example Output: 10
64
65 '''list = [3,8,1,5,10]
66 max = max(list)
67 print(f"Biggest number is {max}")'''
68
69 #or
70
71 '''list =[3,8,1,5,10]
72 def large(list):
73     list.sort()
74     print("Largest number from the list is ",list[-1])
75 large(list)'''
76
77 #6. Question: Write a Python program that reverses a given list of integers.
78 Example Input: [1, 2, 3, 4, 5]
79 #Example Output: [5, 4, 3, 2, 1]
80
81 '''def rev(list):
82     new_list = list[::-1]
83     return new_list
84
85 list = [1,2,3,4,5]
86 print(rev(list))'''
87
88 #or
89
90 .....list = [1,2,3,4,5]
91
92 def rev(list):
93     list2 = 0
94     for i in list:
95         list2 = (i + list2)
96
97     print(list2)
98 rev(list)
99 .....
100
101 #or
102
103 '''

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102 list = [1,2,3,4,5]
103 list.sort(reverse = True)
104 print(list)'''
105
106 # 7. Write a Python program that removes duplicate elements from a list and
    returns the new list.
107 #Example Input: [1, 2, 2, 3, 4, 4, 5]
108 #Example Output: [1, 2, 3, 4, 5]
109
110 '''list = set((1,2,2,3,4,4,5))
111 print(list)'''
112
113 #or
114
115 '''list = [1,2,2,3,4,4,5]
116 new_list = set()
117 l=0
118 def rd(list):
119     for i in list:
120         new_list.add(i)
121         print(new_list)
122 rd(list)'''
123
124 #or
125 # removes duplicate altogether
126
127 '''list = [1,2,2,3,4,4,5]
128 new_list = []
129 for i in list:
130     if i in new_list:
131         new_list.remove(i)
132     else:
133         new_list.append(i)
134 print(new_list)
135 '''
136
137
138 # 8. Write a Python program that counts how many times a specific target
    appears in a list.
139 #Example Input: List: [1, 2, 2, 3, 4, 4, 4, 5], target: 4
140 #Example Output: 3
141
142 '''list = [1,9,2,2,9,9,3,9,4,4,4,9,5]
143 target = 4
144 def func(target):
145     count = 0
146     for i in list:
147         if i ==target:
148             count+=1
149     print(f"{target} appears {count} times")
150 func(target)'''
151
152 # 9. Write a Python program that creates a multiplication table for a given

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number using a list.
153 #Example Input: 3
154 #Example Output: [3, 6, 9, 12, 15, 18, 21, 24, 27, 30]
155
156 '''def table(num):
157     for i in range(1,11):
158         product = num*i
159         print(f"{num} * {i} = {product}")
160 table(3)'''
161
162
163 # 10. Write a Python program that checks if a given list of integers is sorted
    in ascending order.
164 #Example Input: [1, 2, 3, 4, 5]
165 #Example Output: True
166 #Example Input: [1, 3, 2, 4, 5]
167 #Example Output: False
168 #list==sorted(list,reverse=True)
169
170 '''list1= [1, 3, 2, 4, 5]
171
172 if list1 == sorted(list1):
173
174     print (True )
175 else:
176     print(False)'''
177
178 #
179
180 '''list2 = [1,2,3,4,5]
181 def sort(list2):
182     if list2 == sorted(list2):
183         print(True)
184     else:
185         print(False)
186
187 sort(list2)'''
188
189 # 11. Write a Python program that counts the number of vowels in a given
    string.
190 #Example Input: "hello world"
191 #Example Output: 3
192
193 '''list = "hello world"
194 vowels = ['a','e','i','o','u']
195 def func(vowels):
196     count = 0
197     for i in list:
198         if i in vowels:
199             count+=1
200     print(f" The number of vowels in {list} is {count}")
201
202 func(vowels)'''

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203
204
205 # 12. Write a Python program to reverse a given string.
206 #Example Input: "hello"
207 #Example Output: "olleh"
208 '''reverse_string = ""
209 new_string = "hello"
210 for i in range (len(new_string)-1,-1,-1):
211     reverse_string+= new_string[i]
212 print(reverse_string)'''
213
214 #or
215
216 '''string = "hello"
217 new_string = ""
218 #def rev(string):
219 for i in string:
220     new_string = i + new_string
221 print(new_string)
222 #rev(string)'''
223
224 # 13. Remove spaces from a string
225 '''str = "    hello world  "
226 print(str.upper()) # upper
227 print(len(str)) #length of list
228 print(str.strip()) #white space removing in the begining or end
229 print(str.replace(" ","")) #remove spaces from a string
230 '''
231
232 # 14. Count the number of words in a string
233 '''s = "this is a treat"
234 print(len(s.split())) #count the number of words in a string'''
235
236 # 15. Print Even Numbers in a Range
237 '''for i in range(1,11):
238     if i %2 ==0:
239         print(i)'''
240
241 # 16. Calculate the Sum of Digits in a Number
242 '''total =0
243 list = 1,2,3,4
244 for i in list:
245     total = i+total
246 print(total)'''
247
248 # or
249
250 '''num = 128424
251 def func(num):
252     sum = 0
253     for i in str(num):
254         sum = sum+int(i)
255     print(sum)

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256 func(num)'''
257
258 # 17. Count Occurrences of Characters in a String
259 # Question: Write a Python program that counts the occurrences of each
260 # character in a string and stores them in a dictionary.
261 # Example Input: "hello"
262 # Example Output: {'h': 1, 'e': 1, 'l': 2, 'o': 1}
263
264 '''str = "hello"
265
266 def func(str):
267     for i in str:
268         x = str.count(i)
269         #print(f"{i} : {x}")
270         my_dict = { f"{i} : {x}"}
271
272     print(my_dict)
273 func(str)
274 '''
275
276 #18. Find the Key with the Maximum Value in a Dictionary
277 #Question: Write a Python program to find the key with the maximum value in a
278 # dictionary.
279 # Example Input: {'a': 10, 'b': 20, 'c': 15}
280 # Example Output: 'b'
281
282 '''my_dict = {
283     "a" : 10,
284     "b" : 20,
285     "c" : 15
286 }
287 print(my_dict)
288 #print(max(zip(my_dict.values(), my_dict.keys())))
289
290 print(f"max value is in the key :", (max(my_dict, key = my_dict.get)))
291
292 #print(my_dict.get("c"))'''
293
294
295 # 19. Find the Intersection of Two Sets
296 # Question: Write a Python program to find the intersection of two sets.
297 # Example Input: Set 1: {1, 2, 3}, Set 2: {2, 3, 4} ● Example Output: {2, 3}
298
299 '''set1 = {1, 2, 3}
300 set2 = {2, 3, 4}
301 common_set = set1.intersection(set2)
302 print(common_set)'''
303
304 # 20. Remove Duplicates from a List Using a Set
305 #● Question: Write a Python program that removes duplicates from a list using
306 # a set.

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306 #● Example Input: [1, 2, 2, 3, 4, 4, 5]
307 #● Example Output: [1, 2, 3, 4, 5]
308 '''list = [1, 2, 2, 3, 4, 4, 5]
309 no_dupe = set((list))
310 print(no_dupe)
311 '''
312 #or
313
314 '''list = [1,2,2,3,4,4,5]
315 new_list = set()
316 def func(list):
317     for i in list:
318         new_list.add(i)
319     print(new_list)
320 func(list)
321 '''
322
323 '''l = [1,2,3,4,5,6,7,8,3,2,4,5,6]
324 l2 = []
325 for i in l:
326     if i in l2:
327         l2.remove(i)
328     else:
329         l2.append(i)
330 print(l2)''''''
331
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