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# Question 1 Answer
l=[]
for i in range(5):
  num = int(input("Enter an integer: "))
  l.append(num)
print("The elements in the list are: ",l)
print("(a) Total numbers of items in the list: ",len(l))
print("(b) Fourth item in the list: ",l[3])
print("(c) Last three items in the list are: ",l[-3:])
print("(d) All items in the list except the first two: ",l[2:])
print("(e) List in reverse order: ",l[::-1])
print("(f) Largest value in the list: ",max(l))
print("(f) Smallest value in the list: ",min(l))
print("(g) Sum of all values in the list: ",sum(l))
zero_index = l.index(0) if 0 in l else -1
if zero_index !=-1:
  print("(h) Index of the first zero in the list.",zero_index)
else:
  print("(h) There are no zeros in the list.")
sorted_list = sorted(l)
print("(i) The sorted list is: ", sorted_list)
del sorted_list[0]
print("(j) List after deleting the first item: ",sorted_list)
sorted_list[-2]=9875
print("(k) List after changing the second last item: ",sorted_list)
sorted_list.append(-500)
print("(l) List after appending -500: ",sorted_list)
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Enter an integer: 2
Enter an integer: 3
Enter an integer: 5
Enter an integer: 1
Enter an integer: 6
The elements in the list are:  [2, 3, 5, 1, 6]
(a) Total numbers of items in the list:  5
(b) Fourth item in the list:  1
(c) Last three items in the list are:  [5, 1, 6]
(d) All items in the list except the first two:  [5, 1, 6]
(e) List in reverse order:  [6, 1, 5, 3, 2]
(f) Largest value in the list:  6
(f) Smallest value in the list:  1
(g) Sum of all values in the list:  17
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      (h) There are no zeros in the list.
      (i) The sorted list is:  [1, 2, 3, 5, 6]
      (j) List after deleting the first item:  [2, 3, 5, 6]
      (k) List after changing the second last item:  [2, 3, 9875, 6]
      (l) List after appending -500:  [2, 3, 9875, 6, -500]


# Question 2 Answer
series=[]
for i in range(5):
  num=int(input("Enter an integer: "))
  series.append(num)
print("The list of the numbers are: ", series)
smallest = min(series)
index=series.index(smallest)
print("Smallest number in the list is ", smallest)
print("The index of the smallest number is ", index)

      Enter an integer: 2
      Enter an integer: 3
      Enter an integer: 1
      Enter an integer: 4
      Enter an integer: 1
      The list of the numbers are:  [2, 3, 1, 4, 1]
      Smallest number in the list is  1
      The index of the smallest number is  2


# Question 3 Answer
string = input("Enter a string in lower case letters: ")
letter_count = [0]*26
for letter in string:
  index = ord(letter)-ord("a")
  letter_count[index] += 1
print("Letter counts are:",letter_count)

      Enter a string in lower case letters: lackadaisical
      Letter counts are: [4, 0, 2, 1, 0, 0, 0, 0, 2, 0, 1, 2, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0]


# Question 4 Answer
Dict = {'abc': 7,'def': 11,'ghi': 13,'jkl': 17,'mno': 19}
print("The dictionary items are: ", Dict)
print("(a) Value associated with the key 'def' : ", Dict['def'])
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print("(b) List of all the keys in the Dict: ", list(Dict.keys()))
# (c) Loop over the dictionary and print outall the keys and their associated values
for key,value in Dict.items():
    print(" Key:",key," Value:",value,)
if'pqr' in Dict:
  print("(d) 'pqr' is present in the dictionary.")
else:
  print("(d) 'pqr' is not present in the dictionary.")
Dict['abc'] = 23
print("(e) values in the dictionary are: ",list(Dict.values()))
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The dictionary items are:  {'abc': 7, 'def': 11, 'ghi': 13, 'jkl': 17, 'mno': 19}
(a) Value associated with the key 'def' :  11
(b) List of all the keys in the Dict:  ['abc', 'def', 'ghi', 'jkl', 'mno']
 Key: abc  Value: 7
 Key: def  Value: 11
 Key: ghi  Value: 13
 Key: jkl  Value: 17
 Key: mno  Value: 19
(d) 'pqr' is not present in the dictionary.
(e) values in the dictionary are:  [23, 11, 13, 17, 19]
```