**Place all your work in this file. Do not use IDLE or the Python’s Interactive mode.**

Write a statement that creates a list with the following strings: ‘Einstein’, ‘Newton’, ‘Copernicus’, and ‘Kepler’.

Answer:

names = ["Einstein", "Newton", "Copernicus", "Kepler"]

Assume ***names*** references a list. Write a for loop that displays each element of the list.

Answer:

for item in names:

print(item)

Assume the list ***numbersOne*** has 100 elements, and ***numbersTwo*** is an empty list. Write code that copies the values in ***numbersOne*** to ***NumbersTwo***.

Answer: By concatenation since numbersTwo list is empty

NumbersTwo = numbersOne + numbersTwo

Write a function that accepts a list as an argument (assume the list contains integers) and returns the total of the values in the list.

Answer:

integers = [1,2,3]

def list\_function(integers):

return sum(integers)

print(list\_function(integers))

Assume the ***names*** variable references a list of strings. Write code that determines whether ‘Ruby’ is in the names list. If it is, display the message ‘Hello Ruby’. Otherwise display the message ‘No Ruby found”.

Answer:

names = ["john", "Luke", "Ruby"]

searh\_result = "Ruby" in names

if searh\_result == True:

print("Hello Ruby")

else:

print("No Ruby found")

Assume ***list1*** is a list of integers. Write a statement that uses a list comprehension to create a second list containing the squares of the elements of ***list1***.

Answer:

list1 = [1,2,3]

list2 = [item\*\*2 for item in list1]

print(list2)

Assume ***list1*** is a list of integers. Write a statement that uses a list comprehension to create a second list containing the elements of ***list1*** that are greater than 100.

Answer:

list1 = [1,2,3, 300]

list2 = [item for item in list1 if item > 100]

print(list2)

Assume ***list1*** is a list of integers. Write a statement that uses a list comprehension to create a second list containing the elements of ***list1*** that are even numbers.

Answer:

list1 = [1,2,3, 300]

list2 = [ item for item in list1 if item % 2 == 0 ]

print(list2)

Write a statement that creates a two-dimensional list with 5 rows and 3 columns. Then write nested loops that get an integer value from the user for each element in the list.

Answer:

my\_array = []

for row in range(5):

for column in range(3):

input\_value = input(f"Enter a number in row {row} column {column}: ")

my\_array.append(input\_value)

print(my\_array)

Write a statement that creates a two-dimensional list with 4 rows and 6 columns. Then write nested loops that get a floating-point value from the user for each element in the list.

Answer:

my\_array = []

for row in range(4):

for column in range(6):

input\_value = float(input(f"Enter a number in row {row} column {column}: "))

my\_array.append(input\_value)

print(my\_array)