# 1. Create a list of 10 elements of four different data types like int, string, complex and float.

def getDifferentDataTypes():

x = [“hello”, “world”, 1 + 2j, 6.03, 2, 3, 4, 5]

print(x)

# 2. Create a list of size 5 and execute the slicing structure

def list():

x = [None] \* 5

print(x[:2])

# 3. Write a program to get the sum and multiply of all the items in a given list.

def getSumAndMultiply(l):

resSum = sum(l)

x = 1

for n in l:

x \*= n

print(resSum)

print(x)

# 4. Find the largest and smallest number from a given list.

def minAndMax(l):

minimum = min(l)

maximum = max(l)

print(minimum)

print(maximum)

# 5. Create a new list which contains the specified numbers after removing the even numbers from a predefined list.

def removeEvenNumbers(l):

x = []

for n in l:

if n % 2 == 0:

continue

else:

x.append(n)

print(x)

# 6. Create a list of elements such that it contains the squares of the first and last 5 elements between 1 and30 (both included).

def createSquareList(l):

x = []

x.append(1)

for n in range(25,31):

new\_list.append(n \*\* 2)

print(x)

# 7. Write a program to replace the last element in a list with another list.

def replace(list1, list2):

list1 = list1[:(len(list1) - 1)] + list2

print(list1)

# 8. Create a new dictionary by concatenating the following two dictionaries

# Sample input: a={1:10,2:20} b={3:30,4:40}

# Expected output: {1:10,2:20,3:30,4:40}

def concatenate(a,b):

a.update(b)

print(a)

# 9. Create a dictionary that contain numbers in the form(x:x\*x) where x takes all the values between 1 and n(both 1 and n included).

def createDictionary(a):

x = {}

for n in range(1, a+1):

x[n] = n \* n

print(x)

# 10. Write a program which accepts a sequence of comma-separated numbers from console and generates a list and a tuple which contains every number in the form of string.

def createListAndTuple(s):

x = ""

l = []

t = ()

for c in s:

if c != ",":

x += c

else:

l.append(x)

t = (\*t, x)

x = ""

print(l

print(t)