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Reg No: 21BBS0162  
Course: Programming in Python CBS1011

Q1. While Lakshan got ready for the office a shopping list was given by his son and daughter. While returning home Lakshan decides to buy the items from a shop. It decides to buy the items common in both the list, then the items listed only by his son and at last the items listed only by his daughter. Write a program to help him in achieving the task.

Code:

# Anuj Parihar

# 21BBS0162

print('21BB0162 | Anuj Parihar')

print()

n = int(input("Enter number of items by son: "))

s=set()

for i in range(0,n):

  s=s|{input("Enter son's item: ")}

n = 0

n = int(input("Enter number of items by daughter: "))

d=set()

for i in range(0,n):

  d=d|{input("Enter daughters item: ")}

print("common items: "+str(s&d))

print("Items of Son: "+str(s-d))

print("Items of Daugher: "+str(d-s))

Screenshots:

Text

Description automatically generated

Q2 A marketing company has branch in a set of cities ‘S’. The company sends three of their salesmen to various cities in set ‘S’. In the middle of the year, help the manager to find out the cities that are already visited by the salesmen and the cities that are yet to be visited.

Code:

# Name: Anuj Parihar

# RegNo: 21BBS0162

print("21BBS0162 | Anuj Parihar")

cities = {"Ratlam", "Mumbai", "Indore", "Vellore" ,"Bangalore", "Kanchi", "Jaipur", "Kolkata"}

s1 = ["Mumbai"]

s2 = ["Mumbai", "Kolkata"]

s3 = ["Ratlam", "Kanchi", "Indore"]

visit = set()

for city in s1:

    visit.add(city)

for city in s2:

    visit.add(city)

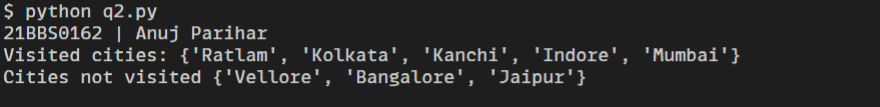
for city in s3:

    visit.add(city)

print("Visited cities: " + str(visit))

print("Cities not visited " + str(cities - visit))

Output:



Q3. A proctor of our university wants a student to write a program that calculates the average of marks scored by her wards in CAT1. She has the details suchas name, register number, mark1, mark2 and mark3 of her proctees. The constraint given by the faculty is that any of the details must not be altered by mistake. Help the student to develop a Python program.

Code:

# Anuj Parihar

# 21BBS0162

print('21BB0162 | Anuj Parihar')

print()

students = [

{

  "Name": "Anuj",

  "Register Number": "21BBS0162",

  "Marks": [80, 90, 55]

},

{

  "Name": "Tarran",

  "Register Number": "21BBS0069",

  "Marks": [82, 92, 98]

},

{

  "Name": "Manan",

  "Register Number": "21BBS0161",

  "Marks": [59, 69, 79]

}

]

for student in students:

  print(student["Name"] + ': ' + str(sum(student["Marks"]) / len(student["Marks"])))

Screenshots

Text

Description automatically generated

Q4. A super market plan to conduct a surprise cum lucky winner contest in a different way. They decide to give a prize for two customers with maximum number of items in common in their shopping list. Write a program to identify common items from the shopping list of two customers. Prepare the common items list as read only

Code:

# Anuj Parihar

# 21BBS0162

print('21BB0162 | Anuj Parihar')

print()

l1 = list()

l1 = [x for x in input("Enter any value for l1: ").split()]

l2 = list()

l2 = [x for x in input("Enter any value for l2: ").split()]

common = list()

for i in l1:

    for j in l2:

        if i == j:

            common.append(i)

common = set(common)

print("Common Items: ",common)

print("number of common items",len(common))

Screenshots:

Text

Description automatically generated