𝐐𝐮𝐞𝐬𝐭𝐢𝐨𝐧𝟏 :

Write a Python code to determine if two strings are isomorphic.

To be isomorphic, each character in the first string must uniquely map to a character in the second string, and vice versa.

Example:

string1 = 'egg'

string2 = 'add'

Output: Isomorphic strings

𝐐𝐮𝐞𝐬𝐭𝐢𝐨𝐧𝟐 :

list1 = [4,7,8,1,3,2,7,7,9]

write a python code to get it sorted in the ascending order without using pre-defined functions ?

𝐐𝐮𝐞𝐬𝐭𝐢𝐨𝐧𝟑 :

Write a PySpark query to find the total sales for each department and identify the highest-selling department from the following data:

Dept Table

ID Name Desc

1 A XYZ

2 B ABC

3 C DEF

4 D HIJ

Sales Table

Trans\_ID Dept Amount

1A 2 300

2A 3 400

3B 3 200

4A 4 500

required output

3 C DEF 600 600

𝐐𝐮𝐞𝐬𝐭𝐢𝐨𝐧𝟒 :

Write SQL query for the below scenario

Consider two data sets

EMP - EMP\_ID, EMP\_NAME

EMP\_SALARY - EMP\_ID, SALARY\_DATE, SALARY\_AMOUNT

EMP - Contains the list of all employees

EMP\_SALARY - Contains the month wise salary of all employees

Required output:

List of all employees whose annual salary is greater than one lakh and

list of employees who have not received salary (new employyes - no row will be present in EMP\_SAL table)

List of output columns needed:

EMP\_ID, EMP\_NAME, SAL\_YEAR, TOTAL\_SALARY

𝐐𝐮𝐞𝐬𝐭𝐢𝐨𝐧𝟓 :

Write a PySpark query to calculate the number of distinct mobile numbers for each username from the following input:

input

username, mobile

user1,999999991:888888882

user3,777777771

user2,777777234:823232351

user5,734452343:943433434:834323434

user1,999999991:9994433777

output

username mobile\_count

user1 3

user2 2

user3 1