Aim: Write python programs to understand Dictionary data type: operations in dictionary, dictionary methods, decision making and looping statements etc.

Write functions in python scripts

a. To generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x).
b. To merge two dict,
c. To sort a dictionary by key, to remove a key,
d. To print all unique values in a dictionary.
e. To find the highest 3 values in a dictionary.
f. To Count the Frequency of Words Appearing in a String Using a Dictionary.

Objective of the Experiment:

1. Understanding dictionary operations and dictionary methods etc.

Algorithm for a. to e. : use appropriate functions of dictionary data type.

Algorithm to Count the Frequency of Words Appearing in a String Using a Dictionary.

1. Enter a string and store it in a variable.
2. Declare a list variable and initialize it to an empty list.
3. Split the string into words and store it in the list.
4. Count the frequency of each word and store it in another list.
5. Using the zip() function, merge the lists containing the words and the word counts into a dictionary.
6. Print the final dictionary.
7. Exit.

Source code for the implementation:

(Write only important functions)

Post Labs:

1. Consider the following dictionary.
   runs={"Test":{"Dhawan":[190,14,35,119],"Kohli":[3,103,13,42],"Pujara":[153,15,133,8]},
   "ODI":{"Dhawan":[37],"Kohli":[63]}}

   Which of the following statements does not generate an error?

   runs["ODI"]["Pujara"].extend([44])

   runs["ODI"]["Pujara"].append([44])

   runs["ODI"]["Pujara"][0]=44

   runs["ODI"]["Pujara"]=[44]

2. Assume that inventory has been initialized as an empty dictionary:

   inventory = {}

   Which of the following generates an error?

   inventory[("Amul","Mystic Mocha")] = 55

   inventory[["Amul","Mystic Mocha"]] = 55

   inventory["Amul, Mystic Mocha"] = 55

   inventory["Amul"] = ["Mystic Mocha",55]

3. Write a Python function frequency(l) that takes as input a list of integers and returns a pair of the form (minfreqlist,maxfreqlist) where

   minfreqlist is a list of numbers with minimum frequency in l, sorted in ascending order

   maxfreqlist is a list of numbers with maximum frequency in l, sorted in ascending

   For instance

   >>> frequency([13,12,11,13,14,13,7,11,13,14,12])

   ([7], [13])

   >>> frequency([13,12,11,13,14,13,7,11,13,14,12,14,14])

   ([7], [13, 14])

   >>> frequency([13,12,11,13,14,13,7,11,13,14,12,14,14,7])

   ([7, 11, 12], [13, 14])