Source Code:

*"""  
ITMD 513 : Dictionaries - HomeWork - Bhanu kureti  
Summary : In this program we will create dictionary files and perform some operations like adding and changing the values  
from the dictionary  
"""*import re  
  
# This function creates a dictionary and then writes the data to the text file  
import sys  
  
from pip.\_vendor.distlib.compat import raw\_input  
  
  
def write\_file():  
 try:  
 print("Write a dictionary to a file")  
 dict = {"Bhanu": 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444}  
 f = open("name\_id.txt", "w")  
 f.write(str(dict))  
 f.close()  
 except Exception:  
 print("Exception Occurred!!!")  
  
  
# This function will be used by all the functions for reading the data from the text file  
def readDataForAllFuncs():  
 try:  
 f = open("name\_id.txt", "r")  
 for lines in f.readlines():  
 # print lines  
 dict = eval(lines)  
 return dict  
 f.close()  
 except Exception:  
 print("Exception Occurred!!")  
  
  
# This function will be used by all the functions for writing the data to the text file  
def writeDataForAllFuncs(nameid\_d):  
 try:  
 f = open("name\_id.txt", "w")  
 f.write(str(nameid\_d))  
 f.close()  
 except Exception:  
 print("Exception Occurred!!")  
  
  
# This function will be used by all the functions for reading the data from the text file  
def read\_file():  
 try:  
 print("LookUp for a person's Id Number")  
 nameid\_d = readDataForAllFuncs()  
 print(nameid\_d)  
 except Exception:  
 print("Exception Occurred!!!")  
  
  
# This function will be used to add the new record of the name and person's id to the dictionary and then update file  
def addNewData():  
 try:  
 print("Add a new Person's data in the dictionary")  
 key = raw\_input("Enter the key that you want to enter in the dictionary : ")  
 while key.isdigit():  
 print("Enter the correct key and not the numbers!!!")  
 key = raw\_input("Enter the key that you want to enter in the dictionary : ")  
  
 value = raw\_input("Enter the value you want to enter in the dictionary : ")  
 k = 0  
 while k == 0:  
 try:  
 int(value)  
 k = 1  
 except Exception:  
 value = raw\_input("Enter numeric digits only for value input: ")  
  
 if k == 1:  
 if (int(value) < 1000 or int(value) > 9999):  
 print("Enter the person's Id in the correct format - 4 digits!!!")  
 value = raw\_input("Enter the value you want to enter in the dictionary : ")  
 k = 0  
 nameid\_d = readDataForAllFuncs()  
 nameid\_d[key] = value  
 print(nameid\_d)  
 writeDataForAllFuncs(nameid\_d)  
 except Exception:  
 print("Exception Occurred!!!")  
  
  
# This function will be used to change the existing value from the dictionary and then update the text file  
def modifyExistingValues():  
 try:  
 print("Change the existing values in the dictionary")  
 print("The dictionary file is :")  
 nameid\_d = readDataForAllFuncs()  
 print(nameid\_d)  
 key = raw\_input("Enter the key for which you want to update the person's Id : ")  
 k = 0  
 while k == 0:  
 if key in nameid\_d:  
 value = raw\_input("Enter the value you want to enter in the dictionary : ")  
 k = 1  
 else:  
 print("The key is not present in the dictionary!!!")  
 options()  
  
 if k == 1:  
 m = 0  
 while m == 0:  
 try:  
 int(value)  
 m = 1  
 except Exception:  
 value = raw\_input("Enter numeric digits only for value input: ")  
  
 if m == 1:  
 if (int(value) < 1000 or int(value) > 9999):  
 print("Enter the person's Id in the correct format - 4 digits!!!")  
 value = raw\_input("Enter the value you want to enter in the dictionary : ")  
 m = 0  
  
 nameid\_d = readDataForAllFuncs()  
 nameid\_d[key] = value  
 print(nameid\_d)  
 writeDataForAllFuncs(nameid\_d)  
  
 except Exception:  
 print("Exception Occurred!!!")  
  
  
# This function will be used to delete the existing value from the dictionary and then update the text file  
def deletingValues():  
 try:  
 print("Delete the existing values in the dictionary")  
 print("The dictionary file is:")  
 nameid\_d = readDataForAllFuncs()  
 print(nameid\_d)  
 key = raw\_input("Enter the key for which you want to delete the record : ")  
 while key.isdigit():  
 print("Enter the correct string and not the numbers!!!")  
 key = raw\_input("Enter the key for which you want to delete the record : ")  
  
 if key in nameid\_d:  
 del nameid\_d[key]  
 else:  
 print("The key is not present in the dictionary!!!")  
  
 print(nameid\_d)  
 writeDataForAllFuncs(nameid\_d)  
 except Exception:  
 print("Exception Occurred!!!")  
  
  
# This function will give the details of the options to be performed on the dictionary file  
def options():  
 try:  
  
 option = input(  
 "Enter the option you want to perform:\n 1:Lookup for a person's Id number \n "  
 "2: Add new name and person's Id\n 3:Change existing Personal Id \n "  
 "4: Delete existing name and Personal Id \n 5:Exit\n")  
 option = int(option)  
  
 while option < 5:  
  
 if option == 1:  
 read\_file()  
 elif option == 2:  
 addNewData()  
 elif option == 3:  
 modifyExistingValues()  
 elif option == 4:  
 deletingValues()  
 else:  
 sys.exit()  
 option = input(  
 "Enter the option you want to perform:\n 1:Lookup for an person's Id number \n 2: Add new name and "  
 "personal Id \n 3:Change existing Personal Id \n 4: Delete existing name and Personal Id \n 5:Exit\n")  
 option = int(option)  
 except Exception:  
 print("Exception Occurred!!!")  
  
  
# Main function where program starts execution as per user's input  
def main():  
 try:  
 write\_file()  
 options()  
 except Exception:  
 print("Exception Occurred!!!")  
  
# Calling the main function  
try:  
 main()  
except Exception:  
 print("Exception Occurred!!!")

**OUTPUT’S:**

1. **Performing correct choices for all options:**

**/Users/bhanuchanderkureti/PycharmProjects/python\_projects/venv/bin/python /Users/bhanuchanderkureti/PycharmProjects/python\_projects/ITMD\_513\_HW\_DICT\_Bhanu\_Kureti.py**

**Write a dictionary to a file**

**Enter the option you want to perform:**

**1:Lookup for a person's Id number**

**2: Add new name and person's Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**1**

**LookUp for a person's Id Number**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**2**

**Add a new Person's data in the dictionary**

**Enter the key that you want to enter in the dictionary : Chandu**

**Enter the value you want to enter in the dictionary : 2345**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Chandu': '2345'}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**3**

**Change the existing values in the dictionary**

**The dictionary file is :**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Chandu': '2345'}**

**Enter the key for which you want to update the person's Id : Chandu**

**Enter the value you want to enter in the dictionary : 7878**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Chandu': '7878'}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**4**

**Delete the existing values in the dictionary**

**The dictionary file is:**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Chandu': '7878'}**

**Enter the key for which you want to delete the record : Chandu**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**5**

**Process finished with exit code 0**

1. **Performing Exceptions for the option 2 in add new data to file:**

**/Users/bhanuchanderkureti/PycharmProjects/python\_projects/venv/bin/python /Users/bhanuchanderkureti/PycharmProjects/python\_projects/ITMD\_513\_HW\_DICT\_Bhanu\_Kureti.py**

**Write a dictionary to a file**

**Enter the option you want to perform:**

**1:Lookup for a person's Id number**

**2: Add new name and person's Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**1**

**LookUp for a person's Id Number**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**2**

**Add a new Person's data in the dictionary**

**Enter the key that you want to enter in the dictionary : 1234**

**Enter the name for the key value which is string not an integer!!!**

**Enter the key that you want to enter in the dictionary : Rakesh**

**Enter the value you want to enter in the dictionary : 1234**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Rakesh': '1234'}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**2**

**Add a new Person's data in the dictionary**

**Enter the key that you want to enter in the dictionary : Rakesh**

**Enter the value you want to enter in the dictionary : qwerr**

**Enter numeric digits only for value input: 123**

**Enter the person's Id in the correct format - 4 digits!!!**

**Enter the value you want to enter in the dictionary : 23**

**Enter the person's Id in the correct format - 4 digits!!!**

**Enter the value you want to enter in the dictionary : 3456**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Rakesh': '3456'}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

1. **Exceptions in the Option 3 in which change the existing values**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Rakesh': '3456'}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**3**

**Change the existing values in the dictionary**

**The dictionary file is :**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Rakesh': '3456'}**

**Enter the key for which you want to update the person's Id : 1234**

**The key is not present in the dictionary!!!**

**Enter the option you want to perform:**

**1:Lookup for a person's Id number**

**2: Add new name and person's Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**3**

**Change the existing values in the dictionary**

**The dictionary file is :**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Rakesh': '3456'}**

**Enter the key for which you want to update the person's Id : rajs**

**The key is not present in the dictionary!!!**

**Enter the option you want to perform:**

**1:Lookup for a person's Id number**

**2: Add new name and person's Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**

**3**

**Change the existing values in the dictionary**

**The dictionary file is :**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': 3333, 'Daksha': 4444, 'Rakesh': '3456'}**

**Enter the key for which you want to update the person's Id : Raju**

**Enter the value you want to enter in the dictionary : 23**

**Enter the person's Id in the correct format - 4 digits!!!**

**Enter the value you want to enter in the dictionary : 45**

**Enter the person's Id in the correct format - 4 digits!!!**

**Enter the value you want to enter in the dictionary : erfw**

**Enter numeric digits only for value input: 7676**

**{'Bhanu': 1111, 'Nandu': 2222, 'Raju': '7676', 'Daksha': 4444, 'Rakesh': '3456'}**

**Enter the option you want to perform:**

**1:Lookup for an person's Id number**

**2: Add new name and personal Id**

**3:Change existing Personal Id**

**4: Delete existing name and Personal Id**

**5:Exit**