**HW – 8(Dictionary)**

**Source Code –**

*#Allows the user to read the data from a dictionary and perform various operations on the dictionary like the updation and deletion of the values***import** re  
  
*#This function creates a dictionary and then writes the data to the text file***def** writefile():  
 **try**:  
 **print "Write a dictionary to a file"** dict = {**'John'**: **'john@gmail.com'**, **'Jill'**: **'jill@yahoo.com'**, **'Tim'**: **'tim@hawk.iit.edu'**, **'Sam'**: **'sam@gmail.com'**}  
 f = open(**"name\_email.txt"**, **"w"**)  
 f.write(str(dict))  
 f.close()  
 **except** Exception:  
 **print "Exception Occured!!!"***#This function is used by all the functions for reading the data from the text file***def** readDataForAllFunctions():  
 **try**:  
 f = open(**"name\_email.txt"**, **"r"**)  
 **for** lines **in** f.readlines():  
 *#print lines* dict = eval(lines)  
 **return** dict  
 f.close()  
 **except** Exception:  
 **print "Exception Occured!!!"***#This function is used by all the functions for writing the data to the text file***def** writeDataForAllFunctions(nameemaildict):  
 **try**:  
 f = open(**"name\_email.txt"**, **"w"**)  
 f.write(str(nameemaildict))  
 f.close()  
 **except** Exception:  
 **print "Exception Occured!!!"***#This function is used by all the functions for reading the data from the text file***def** readfile():  
 **try**:  
 **print "LookUp for an email address"** nameemaildict = readDataForAllFunctions()  
 **print** nameemaildict  
 **except** Exception:  
 **print "Exception Occured!!!"***#This function is used to add the new record of the name and email to the dictionary and then update the text file***def** addNewEntry():  
 **try**:  
 **print "Add a new entry in the dictionary"** key = raw\_input(**"Enter the key that you want to enter in the dictionary : "**)  
 **while**((key.isdigit())):  
 **print "Enter the correct string 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 : "**)  
 **while** ((value.isdigit()) **or** (**not**(re.match(**'\S+@\S+.+\S'**,value)))):  
 **print "Enter the email in the correct format - abc@gmail.com!!!"** value = raw\_input(**"Enter the value you want to enter in the dictionary : "**)  
  
 nameemaildict = readDataForAllFunctions()  
 nameemaildict[key] = value  
 **print** nameemaildict  
 writeDataForAllFunctions(nameemaildict)  
 **except** Exception:  
 **print "Exception Occured!!!"***#This function is used to modify the existing value from the dictionary and then update the text file***def** changeExistingValues():  
 **try**:  
 **print "Change the existing values in the dictionary"  
 print "The dictionary is as follows:"** nameemaildict = readDataForAllFunctions()  
 **print** nameemaildict  
 key = raw\_input(**"Enter the key for which you want to update the email address : "**)  
 **while**((key.isdigit())):  
 **print "Enter the correct string and not the numbers and the key should be correct from the dictionary!!!"** key = raw\_input(**"Enter the key for which you want to update the email address : "**)  
 value = raw\_input(**"Enter the value to change in the dictionary : "**)  
 **while** ((value.isdigit()) **or** (**not**(re.match(**'\S+@\S+.+\S'**,value)))):  
 **print "Enter the email in the correct format - abc@gmail.com!!!"** value = raw\_input(**"Enter the value you want to enter in the dictionary : "**)  
  
 **if** key **in** nameemaildict:  
 nameemaildict[key] = value  
 **else**:  
 **print "The key is not present in the dictionary!!!"  
  
 print** nameemaildict  
 writeDataForAllFunctions(nameemaildict)  
 **except** Exception:  
 **print "Exception Occured!!!"***#This function is used to delete the existing value from the dictionary and then update the text file***def** deleteExistingValues():  
 **try**:  
 **print "Delete the existing values in the dictionary"  
 print "The dictionary is as follows:"** nameemaildict = readDataForAllFunctions()  
 **print** nameemaildict  
 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** nameemaildict:  
 **del** nameemaildict[key]  
 **else**:  
 **print "The key is not present in the dictionary!!!"  
  
 print** nameemaildict  
 writeDataForAllFunctions(nameemaildict)  
 **except** Exception:  
 **print "Exception Occured!!!"***#Main Function;Used to call the different functions based on the user input***def** main():  
 **try**:  
 writefile()  
 option = input(**"Enter the choice you want:\n 1:Lookup for an email address\n 2: Add new name and email address \n 3:Change existing email address \n 4: Delete existing name and email address \n 5:Exit\n"**)  
 **while**(option <= 4):  
 **if**(option == 1):  
 readfile()  
 **elif**(option == 2):  
 addNewEntry()  
 **elif**(option == 3):  
 changeExistingValues()  
 **elif**(option == 4):  
 deleteExistingValues()  
 **else**:  
 sys.exit()  
 option = input(**"Enter the choice you want:\n 1:Lookup for an email address\n 2: Add new name and email address \n 3:Change existing email address \n 4: Delete existing name and email address \n 5:Exit\n"**)  
  
 **except** Exception:  
 **print "Exception Occured!!!"***#Calling the main function***try**:  
 main()  
**except** Exception:  
 **print "Exception Occured!!!"**

name\_email.txt

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'Tom': 'tom@gmail.com'}

**Output –**

1. /usr/bin/python2.7 /Users/apple/PycharmProjects/Labs/DictionaryEmailName.py

Write a dictionary to a file

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

1

LookUp for an email address

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

2

Add a new entry in the dictionary

Enter the key that you want to enter in the dictionary : 13

Enter the correct string and not the numbers!!!

Enter the key that you want to enter in the dictionary : johnny

Enter the value you want to enter in the dictionary : 252324

Enter the email in the correct format - abc@gmail.com!!!

Enter the value you want to enter in the dictionary : john@gmail.com

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'johnny': 'john@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

3

Change the existing values in the dictionary

The dictionary is as follows:

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'johnny': 'john@gmail.com'}

Enter the key for which you want to update the email address : 3214

Enter the correct string and not the numbers and the key should be correct from the dictionary!!!

Enter the key for which you want to update the email address : john

Enter the value to change in the dictionary : john@yahoo.com

The key is not present in the dictionary!!!

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'johnny': 'john@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

4

Delete the existing values in the dictionary

The dictionary is as follows:

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'johnny': 'john@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the key for which you want to delete the record : johnny

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

5

Process finished with exit code 0

1. /usr/bin/python2.7 /Users/apple/PycharmProjects/Labs/DictionaryEmailName.py

Write a dictionary to a file

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

1

LookUp for an email address

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

2

Add a new entry in the dictionary

Enter the key that you want to enter in the dictionary : 543

Enter the correct string and not the numbers!!!

Enter the key that you want to enter in the dictionary : Disk

Enter the value you want to enter in the dictionary : 2145

Enter the email in the correct format - abc@gmail.com!!!

Enter the value you want to enter in the dictionary : dsaf324

Enter the email in the correct format - abc@gmail.com!!!

Enter the value you want to enter in the dictionary : disk@

Enter the email in the correct format - abc@gmail.com!!!

Enter the value you want to enter in the dictionary : disk@gmail.com

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Disk': 'disk@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

3

Change the existing values in the dictionary

The dictionary is as follows:

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'Disk': 'disk@gmail.com'}

Enter the key for which you want to update the email address : 324

Enter the correct string and not the numbers and the key should be correct from the dictionary!!!

Enter the key for which you want to update the email address : dsk

Enter the value to change in the dictionary : disk@yahoo.com

The key is not present in the dictionary!!!

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'Disk': 'disk@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

4

Delete the existing values in the dictionary

The dictionary is as follows:

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Disk': 'disk@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the key for which you want to delete the record : dsk

The key is not present in the dictionary!!!

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Disk': 'disk@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

5

Process finished with exit code 0

/usr/bin/python2.7 /Users/apple/PycharmProjects/Labs/DictionaryEmailName.py

Write a dictionary to a file

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

1

LookUp for an email address

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

2

Add a new entry in the dictionary

Enter the key that you want to enter in the dictionary : 324

Enter the correct string and not the numbers!!!

Enter the key that you want to enter in the dictionary : fin

Enter the value you want to enter in the dictionary : eaf

Enter the email in the correct format - abc@gmail.com!!!

Enter the value you want to enter in the dictionary : fin@gmail.com

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'fin': 'fin@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

3

Change the existing values in the dictionary

The dictionary is as follows:

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'fin': 'fin@gmail.com'}

Enter the key for which you want to update the email address : 314

Enter the correct string and not the numbers and the key should be correct from the dictionary!!!

Enter the key for which you want to update the email address : afd

Enter the value to change in the dictionary : fddf

Enter the email in the correct format - abc@gmail.com!!!

Enter the value you want to enter in the dictionary : fin@gmail.com

The key is not present in the dictionary!!!

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'fin': 'fin@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

4

Delete the existing values in the dictionary

The dictionary is as follows:

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com', 'fin': 'fin@gmail.com'}

Enter the key for which you want to delete the record : fin

{'Tim': 'tim@hawk.iit.edu', 'Jill': 'jill@yahoo.com', 'John': 'john@gmail.com', 'Sam': 'sam@gmail.com'}

Enter the choice you want:

1:Lookup for an email address

2: Add new name and email address

3:Change existing email address

4: Delete existing name and email address

5:Exit

6

Process finished with exit code 0