IT Technology Network
Assignment 10
Dictionaries

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Professional Higher Education

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1. Introduction

This report is about an guide to show my assignment what I get in Lillebaelt Academy. During of my works I use Notepad++ and Pycharm to convert Python code what I used during create program. The audience of this document will be people in the class who are also handle python programming, but the audience must have done and understand the first 10 chapters in" Starting out with Python 2nd edition" by Tony Gaddis

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2. 8. Name and Email Addresses

“Write a program that keeps names and email addresses in a dictionary as key-value pairs. The program should display a menu that lets the user look up a person’s email address, add a new name and email address, change an existing email address, and delete an existing name and email address. The program should pickle the dictionary and save it to a file when the user exits the program. Each time the program starts, it should retrieve the dictionary from the file and unpickle it.”

Python Code:

```
# Constans for the menu choices
LOOK_UP = 1
ADD = 2
CHANGE = 3
DELETE = 4
QUIT = 5

def main():
    # Create an empty dictionary.

    eMails = {}

    # Initialize a variable for the user's choice.

    choice = 0

    while choice != QUIT:
        # Get the user's menu choice.
        choice = getMenuchoice()
        # Process the choice.
        if choice == LOOK_UP:
            lookUp(eMails)
        elif choice == ADD:
                add (eMails)
        elif choice == CHANGE:
            change(eMails)
        elif choice == DELETE:
            delete(eMails)

def getMenuchoice():
    print()
    print('Persons and Their E-mail addresses')
    print('---------------------------')
    print('1. Look up an E-mail')
    print('2. Add a new E-mail')
    print('3. Change an E-mail')
    print('4. Delete an E-mail')
    print('5. Quit the program')
    print()

 # Get the user's choice.
    choice = int(input('Enter your choice: '))

    # Validate the choice.
    while choice < LOOK_UP or choice > QUIT:
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```
        choice = int(input('Enter a valid choice: '))

    # return the user's choice.
    return choice
def lookUp(eMails):
    # Get a name to look up.
    name = input('Enter a name: ')

    # Look it up in the dictionary.
    print(eMails.get(name, 'Not found.'))

# The add function adds a new entry into the
# e-mails dictionary.
def add(eMails):
    # Get a name and birthday.
    name = input('Enter a name: ')
    mail = input('Enter an e-mail address: ')

    # If the name does not exist, add it.
    if name not in eMails:
        eMails[name] = mail
    else:
        print('That entry already exists.')

# The change function changes an existing
# entry in the e-mails dictionary.
def change(eMails):
    # Get a name to look up.
    name = input('Enter a name: ')

    if name in eMails:
        # Get a new birthday.
        mail = input('Enter the new e-mail address: ')

        # Update the entry.
        eMails[name] = mail
    else:
        print('That name is not found.')

# The delete function deletes an entry from the
# e-mails dictionary.
def delete(eMails):
    # Get a name to look up.
    name = input('Enter a name: ')

    # If the name is found, delete the entry.
    if name in eMails:
        del eMails[name]
    else:
        print('That name is not found.')

main()
```


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Output:

As it seems the program has several outputs which are will be introduce next.

- The user just added a new name and an e-mail address. The program asked from user to “Enter a name:” and “Enter an e-mail address:”.

```
Persons and Their E-mail addresses
--------------------------
1. Look up a Name and E-mail
2. Add a new Name and E-mail
3. Change an E-mail
4. Delete Name and E-mail
5. Quit the program

Enter your choice: 2
Enter a name: Milan Vince
Enter an e-mail address: mila1025@eal.dk
```

- With “Look up” function the user is able to check what kind of name and address is in the dictionary.

```
Persons and Their E-mail addresses
--------------------------
1. Look up a Name and E-mail
2. Add a new Name and E-mail
3. Change an E-mail
4. Delete Name and E-mail
5. Quit the program

Enter your choice: 1
Enter a name: Milan Vince
mila1025@eal.dk
```

- With 3rd function there is possible to change

```
Persons and Their E-mail addresses
--------------------------
1. Look up a Name and E-mail
2. Add a new Name and E-mail
3. Change an E-mail
4. Delete Name and E-mail
5. Quit the program

Enter your choice: 3
Enter a name: Milan Vince
Enter the new e-mail address: mila1025@edu.eal.dk
```

- Afterwards it can be check, the program works

```
Persons and Their E-mail addresses
--------------------------
1. Look up a Name and E-mail
2. Add a new Name and E-mail
3. Change an E-mail
4. Delete Name and E-mail
5. Quit the program

Enter your choice: 1
Enter a name: Milan Vince
mila1025@edu.eal.dk
```

- Choosing 4th means the user is deleting the current name and e-mail address from the dictionary

```
Persons and Their E-mail addresses
--------------------------
1. Look up a Name and E-mail
2. Add a new Name and E-mail
3. Change an E-mail
4. Delete Name and E-mail
5. Quit the program

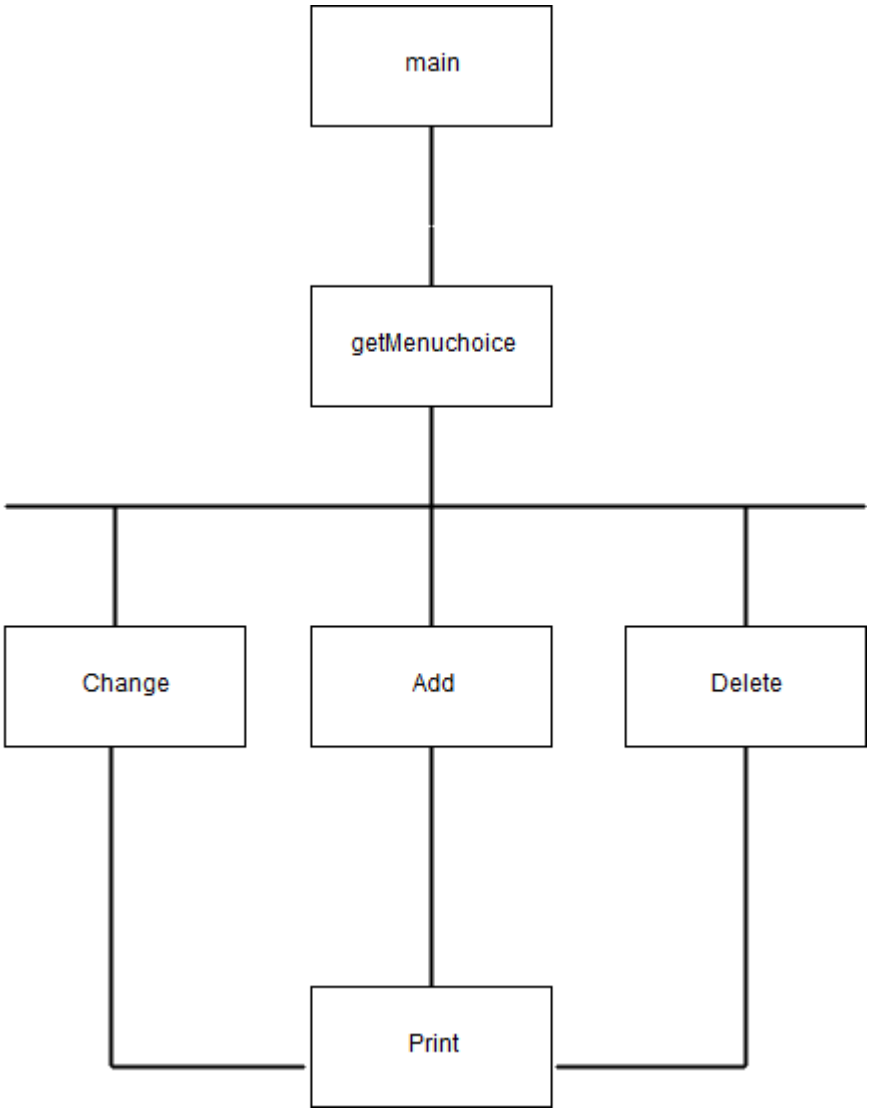
Enter your choice: 4
Enter a name: Milan Vince
```

- After delete the account it seems there is no anymore registered name and e-mail in the database

```
Persons and Their E-mail addresses
--------------------------
1. Look up a Name and E-mail
2. Add a new Name and E-mail
3. Change an E-mail
4. Delete Name and E-mail
5. Quit the program

Enter your choice: 1
Enter a name: Milan Vince
Not found.
```

Hierarchy Diagram



The diagram starts from main, and continue on “getMenuchoice” where are separating for three different way: At “Add” the user is able to register one new name and e-mail address into the dictionary. With “Change” is able to rewrite the previous e-mail address and add a new one. By “Delete” the user can remove the name and the e-mail address from the dictionary, afterwards the program will not find the previous account.

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3. Conclusion

In my point of view, task 8 was a great opportunity to practice the way how the functions work. Last but not least I have just get better to create hierarchy diagrams, this is a great way to describe, and I will continue the work with them at the afterwards.

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