The post card list project

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Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all documented namespaces with brief descriptions:

exam_requests 7
exam_solution.PostcardList 7

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

exam_requests.PostcardList 9
exam_solution.PostcardList.PostcardList 9
TestCase
    exam_requests.Test 13

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

exam_requests.PostcardList 9
exam_solution.PostcardList.PostcardList 9
exam_requests.Test 13

Chapter 4

Namespace Documentation

4.1 exam_requests Namespace Reference

Classes

- class PostcardList
- class Test

4.1.1 Detailed Description

```
Exam requests:

1. Write a class PostcardList that satisfies the tests (defined using unittest).

SPECIFICATIONS:
Class PostcardList reads/writes Postcard messages from/to a properly formatted file: each record (i.e., file's
The Postcard format is "date:$(DATE); from:$(SENDER); to:$(RECEIVER);" (e.g., "date:2009-12-24; from:Daisy; to

Class PostcardList must have at least these attributes:
 - _file: file name, eventually with the full path.
 - _postcards: list of postcards read from _file.
 - _date: is a dict where the key is the string date, and the value is a list of indices. Each index refers to
 - _from: is a dict where the key is the string sender, and the value is a list of indices. Each index refers
 - _to:   is a dict where the key is the string receiver, and the value is a list of indices. Each index refer

Class PostcardList must manage the I/O file through the following member functions. Note that you are free to
 - writeFile(self,...): write self.{_date,_from,_to} to self._file
 - readFile(self,...): from self._file read self.{_date,_from,_to}
 - parsePostcards(self,...): parse self._postcards, set self.{_date,_from,_to}
 - updateFile(self,...): as write but appending to self._file
 - updateLists(self,...): as read but appending to self._postcards
 - getNumberOfPostcards(self): returns length of self._postcards

Class PostcardList must manage the sorting of dates/senders/receivers. Note that the names and arguments of th
 - getPostcardsByDateRange(self,date_range): returns the postcards within a date_range
 - getPostcardsBySender(self, sender): returns the postcards from a sender
 - getPostcardsByReceiver(self, receiver): returns the postcards to a receiver
```

4.2 exam_solution.PostcardList Namespace Reference

Classes

- class PostcardList

4.2.1 Detailed Description

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Intresting notes:
Initially the class was implemented using the defaultdict class
from collections package. This caused problems with the method test
(test_check_sent_received_when)which is implemented using try-catch
statement, so defaultdict doesn't return an error when trying to
access an item that is not there it creates a new item. In this
case it would create an empty list rather than throwing an exception.

All other functions passed the test.Defaultdict takes a type to initialize
as a default type.

Chapter 5

Class Documentation

5.1 exam_requests.PostcardList Class Reference

The documentation for this class was generated from the following file:

- exam_requests.py

5.2 exam_solution.PostcardList.PostcardList Class Reference

Public Member Functions

- def __init__ (self)
- def writeFile (self, _file)
- def readFile (self, _file)
- def parsePostcards (self, _postcard)
- def updateFile (self)
- def updateLists (self, _file)
- def add_to_list (self, _dict, _key, _index)
- def getNumberOfPostcards (self)
- def getPostcardsByDateRange (self, date_range)
- def getPostcardsBySender (self, sender)
- def getPostcardsByReceiver (self, receiver)

5.2.1 Detailed Description

```
class manages a list of post cards, that are added from a file.It
reads a file where each line represents a postcard with to, from,
and date when the post card was sent.
```

5.2.2 Constructor & Destructor Documentation

5.2.2.1 __init__()

```
def exam_solution.PostcardList.PostcardList.__init__ (
              self )
```

```
"Initialize a tree with all arguments to default
value. We decided to create an object withtout a file to
read from but use the methods provided by class. This is
design passed by the class.
```

5.2.3 Member Function Documentation

5.2.3.1 add_to_list()

```
def exam_solution.PostcardList.PostcardList.add_to_list (
              self,
              _dict,
              _key,
              _index )
```

```
@param _dict: dictionary to be added
@param _key: key to be used
@param _index: The index of the record
Function used to add an item to the dictionary
```

5.2.3.2 getNumberOfPostcards()

```
def exam_solution.PostcardList.PostcardList.getNumberOfPostcards (
              self )
```

```
returns the number of postcards
@return int: Number of postcards in the self._postcards
```

5.2.3.3 getPostcardsByDateRange()

```
def exam_solution.PostcardList.PostcardList.getPostcardsByDateRange (
              self,
              date_range )
```

```
returns the postcards within a date_range
@param date_range : search for all the postcards
that were  within the range that was passed.
@return: list of postcards sent within the range.
```

5.2.3.4 getPostcardsByReceiver()

```
def exam_solution.PostcardList.PostcardList.getPostcardsByReceiver (
              self,
              receiver )
```

```
get postcards send to a receiver
@param receiver: search for all the postcards
that were sent by Sender
@return: list of postcards send by the sender.
```

5.2.3.5 getPostcardsBySender()

```
def exam_solution.PostcardList.PostcardList.getPostcardsBySender (
              self,
              sender )
```

```
returns the postcards from a sender.
@param sender: search for all the postcards
that were sent by sender
@return: list of postcards send by the sender.
```

5.2.3.6 parsePostcards()

```
def exam_solution.PostcardList.PostcardList.parsePostcards (
              self,
              _postcard )
```

```
@param _postcard: list of postcards in the case object's.
parse self._postcards, set self.{_date,_from,_to}
and  return to the calling function
```

5.2.3.7 readFile()

```
def exam_solution.PostcardList.PostcardList.readFile (
              self,
              _file )
```

```
Read from a file to self._postcardlist.
@param _file: inputfile to be written to using data that from
object's _postcard's list member. Call the update list function
```

5.2.3.8 updateFile()

```
def exam_solution.PostcardList.PostcardList.updateFile (
              self )
```

Append to a self.{_date,_from,_to} to self._file.
@param _file: outputfile to be updated using data from
object's _postcard's list member.

5.2.3.9 updateLists()

```
def exam_solution.PostcardList.PostcardList.updateLists (
              self,
              _file )
```

Update the object's _postcardlist with
postcards from the passed file.
@param _file: the file to be read from to
update the _postcardlist.

5.2.3.10 writeFile()

```
def exam_solution.PostcardList.PostcardList.writeFile (
              self,
              _file )
```

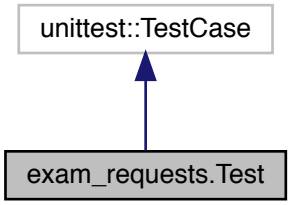
write to a new file self.{_date,_from,_to} to self._file.
@param _file: inputfile to be written to using data from
object's _postcard's list member.

The documentation for this class was generated from the following file:

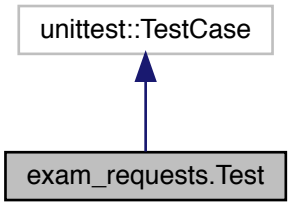
- exam_solution/PostcardList.py

5.3 exam_requests.Test Class Reference

Inheritance diagram for exam_requests.Test:



Collaboration diagram for exam_requests.Test:



Public Member Functions

- def **setUpClass** (self)
- def **test_missing_attributes** (self)
- def **test_check_getPostcardByDateRange** (self)
- def **test_check_getPostcardBySender** (self)
- def **test_check_getPostcardByReceiver** (self)
- def **test_check_sent_received_when** (self)

The documentation for this class was generated from the following file:

- exam_requests.py

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