

xBox

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7.45 /Users/lixiaoyang/git/xBox/xBox/src/io/AdminPage.java File Reference	109
7.46 /Users/lixiaoyang/git/xBox/xBox/src/io/confirmPayment.java File Reference	109
7.47 /Users/lixiaoyang/git/xBox/xBox/src/io/confirmReturn.java File Reference	109
7.48 /Users/lixiaoyang/git/xBox/xBox/src/io/IO.java File Reference	109
7.49 /Users/lixiaoyang/git/xBox/xBox/src/io/login.java File Reference	110
7.50 /Users/lixiaoyang/git/xBox/xBox/src/io/login_or_register.java File Reference	110
7.51 /Users/lixiaoyang/git/xBox/xBox/src/io/register.java File Reference	110
7.52 /Users/lixiaoyang/git/xBox/xBox/src/io/requestBox.java File Reference	110
7.53 /Users/lixiaoyang/git/xBox/xBox/src/io/returnBox.java File Reference	111
7.54 /Users/lixiaoyang/git/xBox/xBox/src/io/SearchClient.java File Reference	111
7.55 /Users/lixiaoyang/git/xBox/xBox/src/io/SearchItem.java File Reference	111
7.56 /Users/lixiaoyang/git/xBox/xBox/src/io/storeBox.java File Reference	112
7.57 /Users/lixiaoyang/git/xBox/xBox/src/io/UserPage.java File Reference	112
7.58 /Users/lixiaoyang/git/xBox/xBox/src/test/TestCmdReqRentable.java File Reference	112
7.59 /Users/lixiaoyang/git/xBox/xBox/src/test/TestRentable.java File Reference	112
7.60 /Users/lixiaoyang/git/xBox/xBox/src/test/TestStorer.java File Reference	113
7.61 /Users/lixiaoyang/git/xBox/xBox/src/test/TestUserInterfaces.java File Reference	113
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7.63 /Users/lixiaoyang/git/xBox/xBox/src/utlis/XBoxDate.java File Reference	113
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Chapter 1

Namespace Index

1.1 Package List

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io	11
test	11
utils	12
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Hierarchical Index

2.1 Class Hierarchy

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

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data.ClientStudent	26
data.ClientManager	21
data.ClientSearcher	22
data.ClientStorer	24
cmd.Command	34
cmd.Undoable	86
cmd.CmdConfirmPayment	27
cmd.CmdConfirmReturn	29
cmd.CmdRequestRentable	30
cmd.CmdRequestReturn	31
cmd.CmdStoreRentable	33
data.Database	37
debug.DebugConfig	38
io.IO	46
io.AdminPage	15
io.SearchClient	78
io.SearchItem	79
io.UserPage	91
io.confirmPayment	35
io.confirmReturn	36
io.login	47
io.login_or_register	48
io.register	56
io.requestBox	72
io.returnBox	77
io.storeBox	80
app.Main	49
data.Record	49
data.RecordManager	52
data.RecordSearcher	53
data.Rentable	57

data.Bag	16
data.Box	18
data.RentableAllocator	58
data.RentableManager	59
data.RentableSearcher	60
data.RentableStatus	61
data.RentableStatusAvailable	62
data.RentableStatusOccupied	64
data.RentableStatusPending	65
data.RentableStatusRequested	67
data.Request	70
data.RequestManager	73
data.RequestSearcher	74
utils.StringUtils	81
test.TestCmdReqRentable	82
test.TestRentable	82
test.TestStorer	83
test.TestUserInterfaces	83
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utils.XBoxDate	94
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Exception	
ex.ExAccountExists	39
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ex.ExInvalidFileFormat	43
ex.ExInvalidPassword	44
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Chapter 3

Class Index

3.1 Class List

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

xBox.AdminInterfaces	
Admin Interface	13
io.AdminPage	
AdminPage	15
data.Bag	16
data.Box	18
data.Client	19
data.ClientManager	21
data.ClientSearcher	22
data.ClientStaff	23
data.ClientStorer	24
data.ClientStudent	26
cmd.CmdConfirmPayment	
Admin command: confirm item request	27
cmd.CmdConfirmReturn	
Admin command: confirm return request	29
cmd.CmdRequestRentable	
User command: item request	30
cmd.CmdRequestReturn	
User command: return request	31
cmd.CmdStoreRentable	
User command: store	33
cmd.Command	34
io.confirmPayment	
Confirm payment	35
io.confirmReturn	
ConfirmReturn	36
data.Database	37
debug.DebugConfig	38
ex.ExAccountExists	
ExAccountExists	39
ex.ExEmptyVector	
ExEmptyVector	40
ex.ExEntryNotFound	
ExEntryNotFound	41

ex.ExInfoMissing	
ExInfoMissing	42
ex.ExInvalidFileFormat	
ExInvalidFileFormat	43
ex.ExInvalidPassword	
ExInvalidPassword	44
ex.ExNoSufficientRentable	
ExNoSufficientRentable	45
io.IO	
IO	46
io.login	47
io.login_or_register	48
app.Main	49
data.Record	49
data.RecordManager	52
data.RecordSearcher	53
data.RecordStorer	54
io.register	56
data.Rentable	57
data.RentableAllocator	58
data.RentableManager	59
data.RentableSearcher	60
data.RentableStatus	61
data.RentableStatusAvailable	62
data.RentableStatusOccupied	64
data.RentableStatusPending	65
data.RentableStatusRequested	67
data.RentableStorer	68
data.Request	70
io.requestBox	
Request	72
data.RequestManager	73
data.RequestSearcher	74
data.RequestStorer	75
io.returnBox	
Return	77
io.SearchClient	
Search Client	78
io.SearchItem	
Search Item	79
io.storeBox	
Store	80
utils.StringUtils	81
test.TestCmdReqRentable	82
test.TestRentable	82
test.TestStorer	83
test.TestUserInterfaces	83
cmd.Undoable	
Description for Undoable.java	86
xBox.UserInterfaces	
User Interface	88
io.UserPage	
UserPage	91
xBox.Xbox	
XBox UI Interface	92
utils.XBoxDate	94
data.XBoxStorer< ElemType >	
Storer interface interface provided for data structure to manage insertion and deletion operations	95

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

/Users/lixiaoyang/git/xBox/xBox/src/app/Main.java	97
/Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdConfirmPayment.java	97
/Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdConfirmReturn.java	98
/Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdRequestRentable.java	98
/Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdRequestReturn.java	98
/Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdStoreRentable.java	98
/Users/lixiaoyang/git/xBox/xBox/src/cmd/Command.java	99
/Users/lixiaoyang/git/xBox/xBox/src/cmd/Undoable.java	99
/Users/lixiaoyang/git/xBox/xBox/src/data/Bag.java	99
/Users/lixiaoyang/git/xBox/xBox/src/data/Box.java	99
/Users/lixiaoyang/git/xBox/xBox/src/data/Client.java	100
/Users/lixiaoyang/git/xBox/xBox/src/data/ClientManager.java	100
/Users/lixiaoyang/git/xBox/xBox/src/data/ClientSearcher.java	100
/Users/lixiaoyang/git/xBox/xBox/src/data/ClientStaff.java	100
/Users/lixiaoyang/git/xBox/xBox/src/data/ClientStorer.java	101
/Users/lixiaoyang/git/xBox/xBox/src/data/ClientStudent.java	101
/Users/lixiaoyang/git/xBox/xBox/src/data/Database.java	101
/Users/lixiaoyang/git/xBox/xBox/src/data/Record.java	101
/Users/lixiaoyang/git/xBox/xBox/src/data/RecordManager.java	102
/Users/lixiaoyang/git/xBox/xBox/src/data/RecordSearcher.java	102
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/Users/lixiaoyang/git/xBox/xBox/src/data/RentableStatusOccupied.java	104
/Users/lixiaoyang/git/xBox/xBox/src/data/RentableStatusPending.java	104
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/Users/lixiaoyang/git/xBox/xBox/src/data/RentableStorer.java	105
/Users/lixiaoyang/git/xBox/xBox/src/data/Request.java	105
/Users/lixiaoyang/git/xBox/xBox/src/data/RequestManager.java	105
/Users/lixiaoyang/git/xBox/xBox/src/data/RequestSearcher.java	105
/Users/lixiaoyang/git/xBox/xBox/src/data/RequestStorer.java	106

/Users/lixiaoyang/git/xBox/xBox/src/data/XBoxStorer.java	106
/Users/lixiaoyang/git/xBox/xBox/src/debug/DebugConfig.java	106
/Users/lixiaoyang/git/xBox/xBox/src/ex/ExAccountExists.java	107
/Users/lixiaoyang/git/xBox/xBox/src/ex/ExEmptyVector.java	107
/Users/lixiaoyang/git/xBox/xBox/src/ex/ExEntryNotFound.java	107
/Users/lixiaoyang/git/xBox/xBox/src/ex/ExInfoMissing.java	107
/Users/lixiaoyang/git/xBox/xBox/src/ex/ExInvalidFileFormat.java	108
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/Users/lixiaoyang/git/xBox/xBox/src/ex/ExNoSufficientRentable.java	108
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/Users/lixiaoyang/git/xBox/xBox/src/io/IO.java	109
/Users/lixiaoyang/git/xBox/xBox/src/io/login.java	110
/Users/lixiaoyang/git/xBox/xBox/src/io/login_or_register.java	110
/Users/lixiaoyang/git/xBox/xBox/src/io/register.java	110
/Users/lixiaoyang/git/xBox/xBox/src/io/requestBox.java	110
/Users/lixiaoyang/git/xBox/xBox/src/io/returnBox.java	111
/Users/lixiaoyang/git/xBox/xBox/src/io/SearchClient.java	111
/Users/lixiaoyang/git/xBox/xBox/src/io/SearchItem.java	111
/Users/lixiaoyang/git/xBox/xBox/src/io/storeBox.java	112
/Users/lixiaoyang/git/xBox/xBox/src/io/UserPage.java	112
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/Users/lixiaoyang/git/xBox/xBox/src/utlis/StringUtils.java	113
/Users/lixiaoyang/git/xBox/xBox/src/utlis/XBoxDate.java	113
/Users/lixiaoyang/git/xBox/xBox/src/xBox/AdminInterfaces.java	114
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/Users/lixiaoyang/git/xBox/xBox/src/xBox/Xbox.java	114

Chapter 5

Namespace Documentation

5.1 Package app

Classes

- class [Main](#)

5.2 Package cmd

Classes

- class [CmdConfirmPayment](#)
admin command: confirm item request
- class [CmdConfirmReturn](#)
admin command: confirm return request
- class [CmdRequestRentable](#)
user command: item request
- class [CmdRequestReturn](#)
user command: return request
- class [CmdStoreRentable](#)
user command: store
- interface [Command](#)
- class [Undoable](#)
Description for [Undoable.java](#).

5.3 Package data

Classes

- class [Bag](#)
- class [Box](#)
- class [Client](#)
- class [ClientManager](#)
- class [ClientSearcher](#)
- class [ClientStaff](#)
- class [ClientStorer](#)
- class [ClientStudent](#)
- class [Database](#)
- class [Record](#)
- class [RecordManager](#)
- class [RecordSearcher](#)
- class [RecordStorer](#)
- class [Rentable](#)
- class [RentableAllocator](#)
- class [RentableManager](#)
- class [RentableSearcher](#)
- interface [RentableStatus](#)
- class [RentableStatusAvailable](#)
- class [RentableStatusOccupied](#)
- class [RentableStatusPending](#)
- class [RentableStatusRequested](#)
- class [RentableStorer](#)
- class [Request](#)
- class [RequestManager](#)
- class [RequestSearcher](#)
- class [RequestStorer](#)
- interface [XBoxStorer](#)

storer interface interface provided for data structure to manage insertion and deletion operations

5.4 Package debug

Classes

- class [DebugConfig](#)

5.5 Package ex

Classes

- class [ExAccountExists](#)
ExAccountExists.
- class [ExEmptyVector](#)
ExEmptyVector.
- class [ExEntryNotFound](#)

- class [ExEntryNotFound](#).
ExEntryNotFound.
- class [ExInfoMissing](#)
ExInfoMissing.
- class [ExInvalidFileFormat](#)
ExInvalidFileFormat.
- class [ExInvalidPassword](#)
ExInvalidPassword.
- class [ExNoSufficientRentable](#)
ExNoSufficientRentable.

5.6 Package io

Classes

- class [AdminPage](#)
AdminPage.
- class [confirmPayment](#)
confirm payment
- class [confirmReturn](#)
ConfirmReturn.
- interface [IO](#)
IO.
- class [login](#)
- class [login_or_register](#)
- class [register](#)
- class [requestBox](#)
request
- class [returnBox](#)
return
- class [SearchClient](#)
Search Client.
- class [SearchItem](#)
Search Item.
- class [storeBox](#)
store
- class [UserPage](#)
UserPage.

5.7 Package test

Classes

- class [TestCmdReqRentable](#)
- class [TestRentable](#)
- class [TestStorer](#)
- class [TestUserInterfaces](#)

5.8 Package utils

Classes

- class [StringUtils](#)
- class [XBoxDate](#)

5.9 Package xBox

Classes

- class [AdminInterfaces](#)
Admin Interface.
- class [UserInterfaces](#)
User Interface.
- class [Xbox](#)
xBox UI Interface

Chapter 6

Class Documentation

6.1 xBox.AdminInterfaces Class Reference

Admin Interface.

Public Member Functions

- String [summaryAllItems](#) ()
[summaryAllItems\(\)](#)
- String [summaryAllClients](#) ()
[summaryAllClients\(\)](#)
- String [summaryAllRequests](#) ()
[summaryAllRequests\(\)](#)
- String [summaryAllRecords](#) ()
[summaryAllRecords\(\)](#)
- String [summaryClient](#) (String[] cmdLine)
[summaryClient\(\)](#)
- String [summaryItem](#) (String[] cmdLine)
[summaryItem\(\)](#)
- String [confirmPayment](#) (String[] cmdLine)
[confirmPayment\(\)](#)
- String [confirmReturn](#) (String[] cmdLine) throws ExEntryNotFound
[confirmReturn\(\)](#)

Static Public Member Functions

- static [AdminInterfaces](#) [getInstance](#) ()

6.1.1 Detailed Description

Admin Interface.

Author

lixiaoyang

Admin interfaces are defined here

6.1.2 Member Function Documentation

6.1.2.1 confirmPayment()

```
String xBox.AdminInterfaces.confirmPayment (
    String[] cmdLine )
```

[confirmPayment\(\)](#)

payment confirming interface for admin

6.1.2.2 confirmReturn()

```
String xBox.AdminInterfaces.confirmReturn (
    String[] cmdLine ) throws ExEntryNotFound
```

[confirmReturn\(\)](#)

checkin request confirming interface for admin

Exceptions

<i>entry</i>	not found
--------------	-----------

6.1.2.3 getInstance()

```
static AdminInterfaces xBox.AdminInterfaces.getInstance ( ) [static]
```

6.1.2.4 summaryAllClients()

```
String xBox.AdminInterfaces.summaryAllClients ( )
```

[summaryAllClients\(\)](#)

summary of all clients for admin

6.1.2.5 summaryAllItems()

```
String xBox.AdminInterfaces.summaryAllItems ( )
```

[summaryAllItems\(\)](#)

summary of all items for admin

6.1.2.6 summaryAllRecords()

```
String xBox.AdminInterfaces.summaryAllRecords ( )
```

[summaryAllRecords\(\)](#)

summary of all records for admin

6.1.2.7 summaryAllRequests()

```
String xBox.AdminInterfaces.summaryAllRequests ( )
```

[summaryAllRequests\(\)](#)

summary of all requests for admin

6.1.2.8 summaryClient()

```
String xBox.AdminInterfaces.summaryClient (
    String[] cmdLine )
```

[summaryClient\(\)](#)

summary of one certain client for admin

6.1.2.9 summaryItem()

```
String xBox.AdminInterfaces.summaryItem (
    String[] cmdLine )
```

[summaryItem\(\)](#)

summary of one certain item for admin

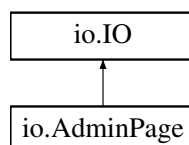
The documentation for this class was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/xBox/AdminInterfaces.java](#)

6.2 io.AdminPage Class Reference

[AdminPage.](#)

Inheritance diagram for io.AdminPage:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.2.1 Detailed Description

[AdminPage](#).

Author

dongjiajie

UI Interface for admin page

6.2.2 Member Function Documentation

6.2.2.1 load()

```
static void io.AdminPage.load ( ) [static]
```

6.2.2.2 show()

```
JPanel io.AdminPage.show ( )
```

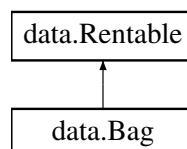
Implements [io.IO](#).

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

- /Users/lixiaoyang/git/xBox/xBox/src/io/[AdminPage.java](#)

6.3 data.Bag Class Reference

Inheritance diagram for data.Bag:



Public Member Functions

- [Bag](#) (String id_, [RentableStatus](#) status_)
- String [getType](#) ()
- String [toString](#) ()
- double [getPrice](#) ()
- String [toJSONString](#) ()

6.3.1 Constructor & Destructor Documentation

6.3.1.1 Bag()

```
data.Bag.Bag (  
    String id_,  
    RentableStatus status_ )
```

6.3.2 Member Function Documentation

6.3.2.1 getPrice()

```
double data.Bag.getPrice ( )
```

Reimplemented from [data.Rentable](#).

6.3.2.2 getType()

```
String data.Bag.getType ( )
```

Reimplemented from [data.Rentable](#).

6.3.2.3 toJSONString()

```
String data.Bag.toJSONString ( )
```

Reimplemented from [data.Rentable](#).

6.3.2.4 toString()

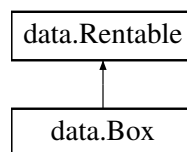
```
String data.Bag.toString ( )
```

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

- [/Users/lixiaoyang/git/xBox/xBox/src/data/Bag.java](#)

6.4 data.Box Class Reference

Inheritance diagram for data.Box:



Public Member Functions

- [Box](#) (String id_, [RentableStatus](#) status_)
- String [getType](#) ()
- String [toString](#) ()
- double [getPrice](#) ()
- String [toJSONString](#) ()

6.4.1 Constructor & Destructor Documentation

6.4.1.1 Box()

```
data.Box.Box (
    String id_,
    RentableStatus status_ )
```

6.4.2 Member Function Documentation

6.4.2.1 getPrice()

```
double data.Box.getPrice ( )
```

Reimplemented from [data.Rentable](#).

6.4.2.2 getType()

```
String data.Box.getType ( )
```

Reimplemented from [data.Rentable](#).

6.4.2.3 toJSONString()

```
String data.Box.toJSONString ( )
```

Reimplemented from [data.Rentable](#).

6.4.2.4 toString()

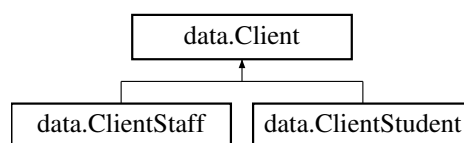
```
String data.Box.toString ( )
```

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

- [/Users/lixiaoyang/git/xBox/xBox/src/data/Box.java](#)

6.5 data.Client Class Reference

Inheritance diagram for data.Client:



Public Member Functions

- [Client](#) (String email_, String phoneNo_, String password_)
- abstract double [getDiscount](#) ()
- abstract int [getMaxBorrowedCount](#) ()
- String [getEmail](#) ()
- String [getPhoneNo](#) ()
- boolean [verifyPassword](#) (String password_)
- String [getPassword](#) ()
- String [toString](#) ()
- String [toJSONString](#) ()

6.5.1 Constructor & Destructor Documentation

6.5.1.1 Client()

```
data.Client.Client (
    String email_,
    String phoneNo_,
    String password_ )
```

6.5.2 Member Function Documentation

6.5.2.1 getDiscount()

```
abstract double data.Client.getDiscount ( ) [abstract]
```

Reimplemented in [data.ClientStaff](#), and [data.ClientStudent](#).

6.5.2.2 getEmail()

```
String data.Client.getEmail ( )
```

6.5.2.3 getMaxBorrowedCount()

```
abstract int data.Client.getMaxBorrowedCount ( ) [abstract]
```

Reimplemented in [data.ClientStaff](#), and [data.ClientStudent](#).

6.5.2.4 getPassword()

```
String data.Client.getPassword ( )
```

6.5.2.5 getPhoneNo()

```
String data.Client.getPhoneNo ( )
```

6.5.2.6 toJSONString()

```
String data.Client.toJSONString ( )
```

Reimplemented in [data.ClientStaff](#), and [data.ClientStudent](#).

6.5.2.7 toString()

```
String data.Client.toString ( )
```

6.5.2.8 verifyPassword()

```
boolean data.Client.verifyPassword (
    String password_ )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[Client.java](#)

6.6 data.ClientManager Class Reference

Public Member Functions

- void [insert](#) ([Client](#) aClient)
- void [delete](#) ([Client](#) aClient)

Static Public Member Functions

- static [ClientManager](#) [getInstance](#) ()

6.6.1 Member Function Documentation

6.6.1.1 delete()

```
void data.ClientManager.delete (
    Client aClient )
```

6.6.1.2 getInstance()

```
static ClientManager data.ClientManager.getInstance ( ) [static]
```

6.6.1.3 insert()

```
void data.ClientManager.insert (
    Client aClient )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[ClientManager.java](#)

6.7 data.ClientSearcher Class Reference

Public Member Functions

- ArrayList< [Client](#) > [searchAll](#) ()
- [Client](#) [searchByKeyword](#) (String email)

Static Public Member Functions

- static [ClientSearcher](#) [getInstance](#) ()

6.7.1 Member Function Documentation

6.7.1.1 getInstance()

```
static ClientSearcher data.ClientSearcher.getInstance ( ) [static]
```

6.7.1.2 searchAll()

```
ArrayList< Client > data.ClientSearcher.searchAll ( )
```

6.7.1.3 searchByKeyword()

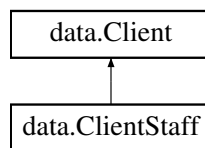
```
Client data.ClientSearcher.searchByKeyword (
    String email )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[ClientSearcher.java](#)

6.8 data.ClientStaff Class Reference

Inheritance diagram for data.ClientStaff:



Public Member Functions

- [ClientStaff](#) (String email, String phoneNo, String password)
- void [changeBorrowedCount](#) (int number)
- double [getDiscount](#) ()
- int [getMaxBorrowedCount](#) ()
- String [toJSONString](#) ()

6.8.1 Constructor & Destructor Documentation

6.8.1.1 ClientStaff()

```
data.ClientStaff.ClientStaff (
    String email,
    String phoneNo,
    String password )
```

6.8.2 Member Function Documentation

6.8.2.1 `changeBorrowedCount()`

```
void data.ClientStaff.changeBorrowedCount (
    int number )
```

6.8.2.2 `getDiscount()`

```
double data.ClientStaff.getDiscount ( )
```

Reimplemented from [data.Client](#).

6.8.2.3 `getMaxBorrowedCount()`

```
int data.ClientStaff.getMaxBorrowedCount ( )
```

Reimplemented from [data.Client](#).

6.8.2.4 `toJSONString()`

```
String data.ClientStaff.toJSONString ( )
```

Reimplemented from [data.Client](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/data/ClientStaff.java](#)

6.9 `data.ClientStorer` Class Reference

Public Member Functions

- `ArrayList< Client > getList ()`
- `void readFromJson (String filePathName) throws IOException`
- `void writeToJson (String filePathName) throws IOException`

Static Public Member Functions

- static [ClientStorer](#) [getInstance](#) ()
- static [Client](#) [getClientByJSONObject](#) (JSONObject jsonObject)
- static JSONObject [putClientToJSONObject](#) ([Client](#) c)

6.9.1 Member Function Documentation

6.9.1.1 getClientByJSONObject()

```
static Client data.ClientStorer.getClientByJSONObject (
    JSONObject jsonObject ) [static]
```

6.9.1.2 getInstance()

```
static ClientStorer data.ClientStorer.getInstance ( ) [static]
```

6.9.1.3 getList()

```
ArrayList< Client > data.ClientStorer.getList ( )
```

6.9.1.4 putClientToJSONObject()

```
static JSONObject data.ClientStorer.putClientToJSONObject (
    Client c ) [static]
```

6.9.1.5 readFromJson()

```
void data.ClientStorer.readFromJson (
    String filePathName ) throws IOException
```

6.9.1.6 writeToJson()

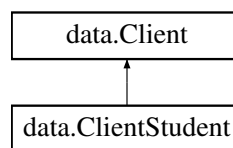
```
void data.ClientStorer.writeToJson (
    String filePathName ) throws IOException
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[ClientStorer.java](#)

6.10 data.ClientStudent Class Reference

Inheritance diagram for data.ClientStudent:



Public Member Functions

- [ClientStudent](#) (String email, String phoneNo, String password)
- void [changeBorrowedCount](#) (int number)
- double [getDiscount](#) ()
- int [getMaxBorrowedCount](#) ()
- String [toJSONString](#) ()

6.10.1 Constructor & Destructor Documentation

6.10.1.1 ClientStudent()

```
data.ClientStudent.ClientStudent (
    String email,
    String phoneNo,
    String password )
```

6.10.2 Member Function Documentation

6.10.2.1 changeBorrowedCount()

```
void data.ClientStudent.changeBorrowedCount (
    int number )
```

6.10.2.2 getDiscount()

```
double data.ClientStudent.getDiscount ( )
```

Reimplemented from [data.Client](#).

6.10.2.3 getMaxBorrowedCount()

```
int data.ClientStudent.getMaxBorrowedCount ( )
```

Reimplemented from [data.Client](#).

6.10.2.4 toJSONString()

```
String data.ClientStudent.toJSONString ( )
```

Reimplemented from [data.Client](#).

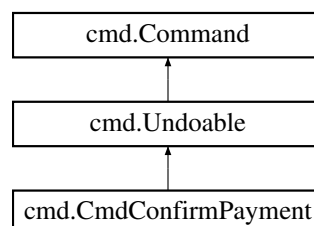
The documentation for this class was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/data/ClientStudent.java](#)

6.11 cmd.CmdConfirmPayment Class Reference

admin command: confirm item request

Inheritance diagram for cmd.CmdConfirmPayment:



Public Member Functions

- String [execute](#) (String[] cmdLine, [Client](#) aClient)
- String [undo](#) ()
- String [redo](#) ()

Additional Inherited Members

6.11.1 Detailed Description

admin command: confirm item request

This class implements request confirming operation of item for admin interface.

6.11.2 Member Function Documentation

6.11.2.1 [execute\(\)](#)

```
String cmd.CmdConfirmPayment.execute (
    String[] cmdLine,
    Client aClient )
```

Implements [cmd.Command](#).

6.11.2.2 [redo\(\)](#)

```
String cmd.CmdConfirmPayment.redo ( )
```

Reimplemented from [cmd.Undoable](#).

6.11.2.3 [undo\(\)](#)

```
String cmd.CmdConfirmPayment.undo ( )
```

Reimplemented from [cmd.Undoable](#).

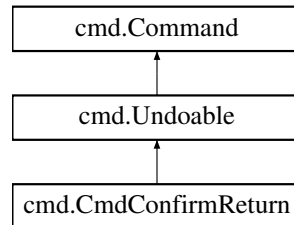
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/cmd/[CmdConfirmPayment.java](#)

6.12 cmd.CmdConfirmReturn Class Reference

admin command: confirm return request

Inheritance diagram for cmd.CmdConfirmReturn:



Public Member Functions

- String `execute` (String[] cmdLine, Client aClient) throws ExEntryNotFound
- String `redo` ()
- String `undo` ()

Additional Inherited Members

6.12.1 Detailed Description

admin command: confirm return request

This class implements request confirming operation of item returning for admin interface.

6.12.2 Member Function Documentation

6.12.2.1 execute()

```
String cmd.CmdConfirmReturn.execute (  
    String[] cmdLine,  
    Client aClient ) throws ExEntryNotFound
```

Parameters

<i>cmdLine</i>	command parameters [0:n-1 item Id]
<i>aClient</i>	the active client

Returns

string, log to be output

Implements [cmd.Command](#).

6.12.2.2 redo()

```
String cmd.CmdConfirmReturn.redo ( )
```

Reimplemented from [cmd.Undoable](#).

6.12.2.3 undo()

```
String cmd.CmdConfirmReturn.undo ( )
```

Reimplemented from [cmd.Undoable](#).

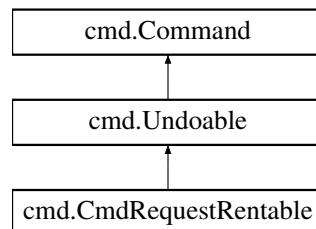
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/cmd/[CmdConfirmReturn.java](#)

6.13 cmd.CmdRequestRentable Class Reference

user command: item request

Inheritance diagram for cmd.CmdRequestRentable:



Public Member Functions

- String [execute](#) (String[] cmdLine, [Client](#) aClient) throws ExNoSufficientRentable
- String [undo](#) ()
- String [redo](#) ()

Additional Inherited Members

6.13.1 Detailed Description

user command: item request

This class implements request operation of item for user interface.

6.13.2 Member Function Documentation

6.13.2.1 execute()

```
String cmd.CmdRequestRentable.execute (
    String[] cmdLine,
    Client aClient ) throws ExNoSufficientRentable
```

Parameters

<i>cmdLine</i>	command parameters [0: type] [1: quantity] [2: rent duration]
<i>aClient</i>	the active client

Returns

string, log to be output

Implements [cmd.Command](#).

6.13.2.2 redo()

```
String cmd.CmdRequestRentable.redo ( )
```

Reimplemented from [cmd.Undoable](#).

6.13.2.3 undo()

```
String cmd.CmdRequestRentable.undo ( )
```

Reimplemented from [cmd.Undoable](#).

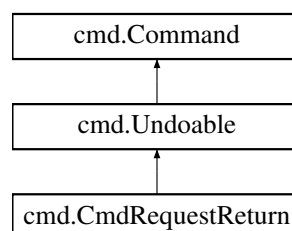
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/cmd/[CmdRequestRentable.java](#)

6.14 cmd.CmdRequestReturn Class Reference

user command: return request

Inheritance diagram for cmd.CmdRequestReturn:



Public Member Functions

- String [execute](#) (String[] cmdLine, [Client](#) aClient) throws [ExEntryNotFound](#)
- String [redo](#) ()
- String [undo](#) ()

Additional Inherited Members

6.14.1 Detailed Description

user command: return request

This class implements request operation of item returning for user interface.

6.14.2 Member Function Documentation

6.14.2.1 [execute\(\)](#)

```
String cmd.CmdRequestReturn.execute (  
    String[] cmdLine,  
    Client aClient ) throws ExEntryNotFound
```

Parameters

<i>cmdLine</i>	command parameters [0:n-1 item Id]
<i>aClient</i>	the active client

Returns

string, log to be output

Implements [cmd.Command](#).

6.14.2.2 [redo\(\)](#)

```
String cmd.CmdRequestReturn.redo ( )
```

Reimplemented from [cmd.Undoable](#).

6.14.2.3 undo()

```
String cmd.CmdRequestReturn.undo ( )
```

Reimplemented from [cmd.Undoable](#).

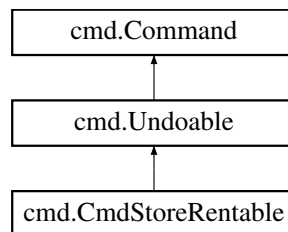
The documentation for this class was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdRequestReturn.java](#)

6.15 cmd.CmdStoreRentable Class Reference

user command: store

Inheritance diagram for cmd.CmdStoreRentable:



Public Member Functions

- String [execute](#) (String[] cmdLine, [Client](#) aClient) throws ExEntryNotFound
- String [redo](#) ()
- String [undo](#) ()

Additional Inherited Members

6.15.1 Detailed Description

user command: store

This class implements store operation for user interface.

6.15.2 Member Function Documentation

6.15.2.1 execute()

```
String cmd.CmdStoreRentable.execute (
    String[] cmdLine,
    Client aClient ) throws ExEntryNotFound
```

Parameters

<i>cmdLine</i>	command parameters [0:n-1 item Id]
<i>aClient</i>	the active client

Returns

string, log to be output

Implements [cmd.Command](#).

6.15.2.2 redo()

```
String cmd.CmdStoreRentable.redo ( )
```

Reimplemented from [cmd.Undoable](#).

6.15.2.3 undo()

```
String cmd.CmdStoreRentable.undo ( )
```

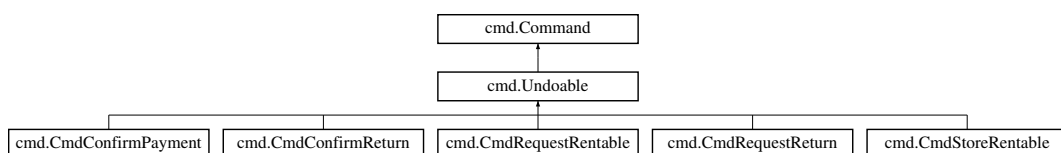
Reimplemented from [cmd.Undoable](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdStoreRentable.java](#)

6.16 cmd.Command Interface Reference

Inheritance diagram for cmd.Command:

**Public Member Functions**

- String [execute](#) (String[] cmdLine, [Client](#) thisClient) throws `ExNoSufficientRentable`, `ExEntryNotFound`

6.16.1 Member Function Documentation

6.16.1.1 execute()

```
String cmd.Command.execute (
    String[] cmdLine,
    Client thisClient ) throws ExNoSufficientRentable, ExEntryNotFound
```

Implemented in [cmd.CmdConfirmPayment](#), [cmd.CmdConfirmReturn](#), [cmd.CmdRequestRentable](#), [cmd.CmdRequestReturn](#), and [cmd.CmdStoreRentable](#).

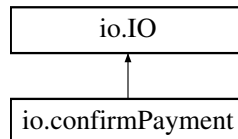
The documentation for this interface was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/cmd/Command.java](#)

6.17 io.confirmPayment Class Reference

confirm payment

Inheritance diagram for io.confirmPayment:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.17.1 Detailed Description

confirm payment

Author

dongjiajie

UI Interface for admin function [[confirmPayment](#)]

6.17.2 Member Function Documentation

6.17.2.1 load()

```
static void io.confirmPayment.load ( ) [static]
```

6.17.2.2 show()

```
JPanel io.confirmPayment.show ( )
```

Implements [io.IO](#).

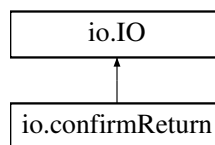
The documentation for this class was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/io/confirmPayment.java](#)

6.18 io.confirmReturn Class Reference

ConfirmReturn.

Inheritance diagram for io.confirmReturn:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.18.1 Detailed Description

ConfirmReturn.

Author

dongjiajie

UI Interface for admin function [[confirmReturn](#)]

6.18.2 Member Function Documentation

6.18.2.1 load()

```
static void io.confirmReturn.load ( ) [static]
```

6.18.2.2 show()

```
JPanel io.confirmReturn.show ( )
```

Implements [io.IO](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/io/confirmReturn.java](#)

6.19 data.Database Class Reference

Public Member Functions

- void [initialize](#) (String[] filePathNames) throws IOException
- void [storeUp](#) (String[] dstPathName) throws IOException

Static Public Member Functions

- static [Database](#) [getInstance](#) ()

6.19.1 Member Function Documentation

6.19.1.1 getInstance()

```
static Database data.Database.getInstance ( ) [static]
```

6.19.1.2 initialize()

```
void data.Database.initialize (
    String[] filePathNames ) throws IOException
```

6.19.1.3 storeUp()

```
void data.Database.storeUp (
    String[] dstPathName ) throws IOException
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[Database.java](#)

6.20 debug.DebugConfig Class Reference

Static Public Attributes

- static final boolean [CMD_UNDOABLE_DEBUG_FLAG](#) = true
- static final boolean [IO_FILEIO_DEBUG_FLAG](#) = false
- static final boolean [VERIFY_LOGIN_DEBUG_FLAG](#) = false
- static final boolean [GET_USER_DEBUG_FLAG](#) = false
- static final boolean [RENTABLE_ALLOCATOR_DEBUG_FLAG](#) = true

6.20.1 Member Data Documentation

6.20.1.1 CMD_UNDOABLE_DEBUG_FLAG

```
final boolean debug.DebugConfig.CMD_UNDOABLE_DEBUG_FLAG = true [static]
```

6.20.1.2 GET_USER_DEBUG_FLAG

```
final boolean debug.DebugConfig.GET_USER_DEBUG_FLAG = false [static]
```

6.20.1.3 IO_FILEIO_DEBUG_FLAG

```
final boolean debug.DebugConfig.IO_FILEIO_DEBUG_FLAG = false [static]
```

6.20.1.4 RENTABLE_ALLOCATOR_DEBUG_FLAG

```
final boolean debug.DebugConfig.RENTABLE_ALLOCATOR_DEBUG_FLAG = true [static]
```

6.20.1.5 VERIFY_LOGIN_DEBUG_FLAG

```
final boolean debug.DebugConfig.VERIFY_LOGIN_DEBUG_FLAG = false [static]
```

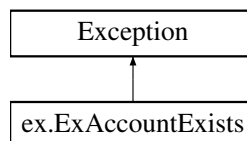
The documentation for this class was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/debug/DebugConfig.java](#)

6.21 ex.ExAccountExists Class Reference

[ExAccountExists](#).

Inheritance diagram for ex.ExAccountExists:



Public Member Functions

- [ExAccountExists](#) ()
- [ExAccountExists](#) (String errorMsg)

6.21.1 Detailed Description

[ExAccountExists](#).

Author

lixiaoyang

Exception for the case where accounts already exist

6.21.2 Constructor & Destructor Documentation

6.21.2.1 ExAccountExists() [1/2]

```
ex.ExAccountExists.ExAccountExists ( )
```

6.21.2.2 ExAccountExists() [2/2]

```
ex.ExAccountExists.ExAccountExists (
    String errorMsg )
```

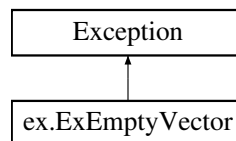
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/ex/[ExAccountExists.java](#)

6.22 ex.ExEmptyVector Class Reference

[ExEmptyVector](#).

Inheritance diagram for ex.ExEmptyVector:



Public Member Functions

- [ExEmptyVector](#) ()
- [ExEmptyVector](#) (String errorMsg)

6.22.1 Detailed Description

[ExEmptyVector](#).

Author

lixiaoyang

Exception in developer level for illegal memory access

6.22.2 Constructor & Destructor Documentation

6.22.2.1 ExEmptyVector() [1/2]

```
ex.ExEmptyVector.ExEmptyVector ( )
```

6.22.2.2 ExEmptyVector() [2/2]

```
ex.ExEmptyVector.ExEmptyVector (
    String errorMsg )
```

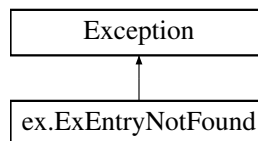
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/ex/[ExEmptyVector.java](#)

6.23 ex.ExEntryNotFound Class Reference

[ExEntryNotFound.](#)

Inheritance diagram for ex.ExEntryNotFound:



Public Member Functions

- [ExEntryNotFound](#) ()
- [ExEntryNotFound](#) (String errorMsg)

6.23.1 Detailed Description

[ExEntryNotFound.](#)

Author

lixiaoyang

Exception for the case where entries are not found

6.23.2 Constructor & Destructor Documentation

6.23.2.1 ExEntryNotFound() [1/2]

```
ex.ExEntryNotFound.ExEntryNotFound ( )
```

6.23.2.2 ExEntryNotFound() [2/2]

```
ex.ExEntryNotFound.ExEntryNotFound (
    String errorMsg )
```

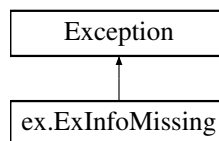
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/ex/[ExEntryNotFound.java](#)

6.24 ex.ExInfoMissing Class Reference

[ExInfoMissing](#).

Inheritance diagram for ex.ExInfoMissing:



Public Member Functions

- [ExInfoMissing](#) ()
- [ExInfoMissing](#) (String errorMsg)

6.24.1 Detailed Description

[ExInfoMissing](#).

Author

lixiaoyang

Exception for the missing personal info when signing in

6.24.2 Constructor & Destructor Documentation

6.24.2.1 ExInfoMissing() [1/2]

```
ex.ExInfoMissing.ExInfoMissing ( )
```

6.24.2.2 ExInfoMissing() [2/2]

```
ex.ExInfoMissing.ExInfoMissing (
    String errorMsg )
```

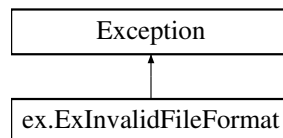
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/ex/[ExInfoMissing.java](#)

6.25 ex.ExInvalidFileFormat Class Reference

[ExInvalidFileFormat](#).

Inheritance diagram for ex.ExInvalidFileFormat:



Public Member Functions

- [ExInvalidFileFormat](#) ()
- [ExInvalidFileFormat](#) (String errorMsg)

6.25.1 Detailed Description

[ExInvalidFileFormat](#).

Author

lixiaoyang

Exception for invalid file format

6.25.2 Constructor & Destructor Documentation

6.25.2.1 ExInvalidFileFormat() [1/2]

```
ex.ExInvalidFileFormat.ExInvalidFileFormat ( )
```

6.25.2.2 ExInvalidFileFormat() [2/2]

```
ex.ExInvalidFileFormat.ExInvalidFileFormat (
    String errorMsg )
```

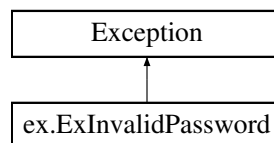
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/ex/[ExInvalidFileFormat.java](#)

6.26 ex.ExInvalidPassword Class Reference

[ExInvalidPassword](#).

Inheritance diagram for ex.ExInvalidPassword:



Public Member Functions

- [ExInvalidPassword](#) ()
- [ExInvalidPassword](#) (String errorMsg)

6.26.1 Detailed Description

[ExInvalidPassword](#).

Author

lixiaoyang

Exception for invalid password

6.26.2 Constructor & Destructor Documentation

6.26.2.1 ExInvalidPassword() [1/2]

```
ex.ExInvalidPassword.ExInvalidPassword ( )
```

6.26.2.2 ExInvalidPassword() [2/2]

```
ex.ExInvalidPassword.ExInvalidPassword (
    String errorMsg )
```

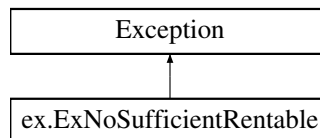
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/ex/[ExInvalidPassword.java](#)

6.27 ex.ExNoSufficientRentable Class Reference

[ExNoSufficientRentable](#).

Inheritance diagram for ex.ExNoSufficientRentable:



Public Member Functions

- [ExNoSufficientRentable](#) ()
- [ExNoSufficientRentable](#) (String errorMsg)

6.27.1 Detailed Description

[ExNoSufficientRentable](#).

Author

lixiaoyang

Exception for the case where items are not sufficient

6.27.2 Constructor & Destructor Documentation

6.27.2.1 ExNoSufficientRentable() [1/2]

```
ex.ExNoSufficientRentable.ExNoSufficientRentable ( )
```

6.27.2.2 ExNoSufficientRentable() [2/2]

```
ex.ExNoSufficientRentable.ExNoSufficientRentable (
    String errorMsg )
```

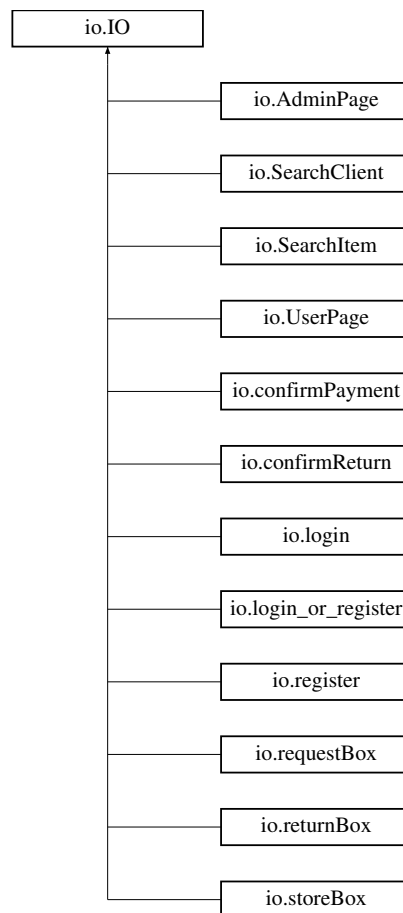
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/ex/[ExNoSufficientRentable.java](#)

6.28 io.IO Interface Reference

[io.](#)

Inheritance diagram for io.IO:



Public Member Functions

- JPanel [show](#) ()

6.28.1 Detailed Description

[IO](#).

Author

dongjiajie

[IO](#) interface for UI

6.28.2 Member Function Documentation

6.28.2.1 [show](#)()

```
JPanel io.IO.show ( )
```

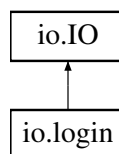
Implemented in [io.AdminPage](#), [io.confirmPayment](#), [io.confirmReturn](#), [io.login](#), [io.login_or_register](#), [io.register](#), [io.requestBox](#), [io.returnBox](#), [io.SearchClient](#), [io.SearchItem](#), [io.storeBox](#), and [io.UserPage](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/io/IO.java](#)

6.29 io.login Class Reference

Inheritance diagram for io.login:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.29.1 Member Function Documentation

6.29.1.1 load()

```
static void io.login.load ( ) [static]
```

6.29.1.2 show()

```
JPanel io.login.show ( )
```

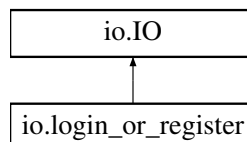
Implements [io.IO](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/io/login.java](#)

6.30 io.login_or_register Class Reference

Inheritance diagram for io.login_or_register:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.30.1 Member Function Documentation

6.30.1.1 load()

```
static void io.login_or_register.load ( ) [static]
```

6.30.1.2 show()

```
JPanel io.login_or_register.show ( )
```

Implements [io.IO](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/io/login_or_register.java](#)

6.31 app.Main Class Reference

Static Public Member Functions

- static void [main](#) (String[] args)

6.31.1 Member Function Documentation

6.31.1.1 main()

```
static void app.Main.main (
    String[] args ) [static]
```

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

- [/Users/lixiaoyang/git/xBox/xBox/src/app/Main.java](#)

6.32 data.Record Class Reference

Public Member Functions

- [Record](#) ()
- [Record](#) ([Client](#) client_, [Rentable](#) rentable_, Date due_)
- [Record](#) ([Client](#) client_, [Rentable](#) rentable_, Date due_, boolean isPaid_)
- void [setClient](#) ([Client](#) c)
- [Client](#) [getClient](#) ()
- void [setRentable](#) ([Rentable](#) r)
- [Rentable](#) [getRentable](#) ()
- void [setDue](#) (Date d)
- Date [getDue](#) ()
- void [setPaymentStatus](#) (boolean isPaid_)
- boolean [getPaymentStatus](#) ()
- String [toString](#) ()
- String [toJSONString](#) ()

6.32.1 Constructor & Destructor Documentation

6.32.1.1 Record() [1/3]

```
data.Record.Record ( )
```

6.32.1.2 Record() [2/3]

```
data.Record.Record (
    Client client_,
    Rentable rentable_,
    Date due_ )
```

6.32.1.3 Record() [3/3]

```
data.Record.Record (
    Client client_,
    Rentable rentable_,
    Date due_,
    boolean isPaid_ )
```

6.32.2 Member Function Documentation

6.32.2.1 getClient()

```
Client data.Record.getClient ( )
```

6.32.2.2 getDue()

```
Date data.Record.getDue ( )
```

6.32.2.3 getPaymentStatus()

```
boolean data.Record.getPaymentStatus ( )
```

6.32.2.4 getRentable()

```
Rentable data.Record.getRentable ( )
```

6.32.2.5 setClient()

```
void data.Record.setClient (
    Client c )
```

6.32.2.6 setDue()

```
void data.Record.setDue (
    Date d )
```

6.32.2.7 setPaymentStatus()

```
void data.Record.setPaymentStatus (
    boolean isPaid_ )
```

6.32.2.8 setRentable()

```
void data.Record.setRentable (
    Rentable r )
```

6.32.2.9 toJSONString()

```
String data.Record.toJSONString ( )
```

6.32.2.10 toString()

```
String data.Record.toString ( )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[Record.java](#)

6.33 data.RecordManager Class Reference

Public Member Functions

- void [insert](#) ([Record](#) record)
- void [delete](#) ([Record](#) record)

Static Public Member Functions

- static [RecordManager](#) [getInstance](#) ()

6.33.1 Member Function Documentation

6.33.1.1 delete()

```
void data.RecordManager.delete (
    Record record )
```

6.33.1.2 getInstance()

```
static RecordManager data.RecordManager.getInstance ( ) [static]
```

6.33.1.3 insert()

```
void data.RecordManager.insert (
    Record record )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RecordManager.java](#)

6.34 data.RecordSearcher Class Reference

Public Member Functions

- [Record](#) [searchByKeyword](#) (String *rentableId*)
- [Record](#) [searchByKeyword](#) ([Rentable](#) *rentable*)
- ArrayList< [Record](#) > [searchAllByKeyword](#) (String *email*)
- ArrayList< [Record](#) > [searchAllByKeyword](#) (Date *aDue*)
- ArrayList< [Record](#) > [searchAll](#) ()

Static Public Member Functions

- static [RecordSearcher](#) [getInstance](#) ()

6.34.1 Member Function Documentation

6.34.1.1 [getInstance\(\)](#)

```
static RecordSearcher data.RecordSearcher.getInstance ( ) [static]
```

6.34.1.2 [searchAll\(\)](#)

```
ArrayList< Record > data.RecordSearcher.searchAll ( )
```

6.34.1.3 [searchAllByKeyword\(\)](#) [1/2]

```
ArrayList< Record > data.RecordSearcher.searchAllByKeyword (
    Date aDue )
```

6.34.1.4 [searchAllByKeyword\(\)](#) [2/2]

```
ArrayList< Record > data.RecordSearcher.searchAllByKeyword (
    String email )
```

6.34.1.5 `searchByKeyword()` [1/2]

```
Record data.RecordSearcher.searchByKeyword (
    Rentable rentable )
```

6.34.1.6 `searchByKeyword()` [2/2]

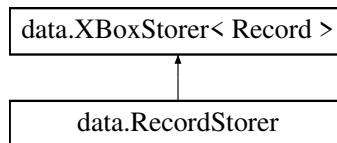
```
Record data.RecordSearcher.searchByKeyword (
    String rentableId )
```

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

- `/Users/lixiaoyang/git/xBox/xBox/src/data/RecordSearcher.java`

6.35 `data.RecordStorer` Class Reference

Inheritance diagram for `data.RecordStorer`:



Public Member Functions

- `ArrayList< Record > getList ()`
- `void addEntry (Record entry)`
- `void delEntry (Record entry)`
- `void readFromJson (String filePathName) throws IOException`
- `void writeToJson (String filePathName) throws IOException`

Static Public Member Functions

- `static RecordStorer getInstance ()`
- `static Record getRecordByJSONObject (JSONObject jsonObject)`
- `static JSONObject putRecordToJSONObject (Record r)`

6.35.1 Member Function Documentation

6.35.1.1 addEntry()

```
void data.RecordStorer.addEntry (
    Record entry )
```

6.35.1.2 delEntry()

```
void data.RecordStorer.delEntry (
    Record entry )
```

6.35.1.3 getInstance()

```
static RecordStorer data.RecordStorer.getInstance ( ) [static]
```

6.35.1.4 getList()

```
ArrayList< Record > data.RecordStorer.getList ( )
```

6.35.1.5 getRecordByJSONObject()

```
static Record data.RecordStorer.getRecordByJSONObject (
    JSONObject jsonObject ) [static]
```

6.35.1.6 putRecordToJSONObject()

```
static JSONObject data.RecordStorer.putRecordToJSONObject (
    Record r ) [static]
```

6.35.1.7 readFromJson()

```
void data.RecordStorer.readFromJson (
    String filePathName ) throws IOException
```

6.35.1.8 writeToJson()

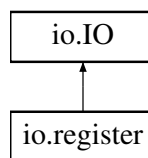
```
void data.RecordStorer.writeToJson (
    String filePathName ) throws IOException
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RecordStorer.java](#)

6.36 io.register Class Reference

Inheritance diagram for io.register:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.36.1 Member Function Documentation

6.36.1.1 load()

```
static void io.register.load ( ) [static]
```

6.36.1.2 show()

```
JPanel io.register.show ( )
```

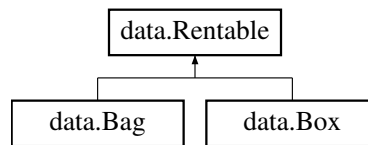
Implements [io.IO](#).

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

- /Users/lixiaoyang/git/xBox/xBox/src/io/[register.java](#)

6.37 data.Rentable Class Reference

Inheritance diagram for data.Rentable:



Public Member Functions

- [Rentable](#) (String rentableID_, [RentableStatus](#) status_)
- String [getId](#) ()
- abstract String [getType](#) ()
- abstract double [getPrice](#) ()
- String [getStatusStr](#) ()
- [RentableStatus](#) [getStatus](#) ()
- void [setStatus](#) ([RentableStatus](#) status_)
- String [toJSONString](#) ()

6.37.1 Constructor & Destructor Documentation

6.37.1.1 Rentable()

```
data.Rentable.Rentable (
    String rentableID_,
    RentableStatus status_ )
```

6.37.2 Member Function Documentation

6.37.2.1 getId()

```
String data.Rentable.getId ( )
```

6.37.2.2 getPrice()

```
abstract double data.Rentable.getPrice ( ) [abstract]
```

Reimplemented in [data.Bag](#), and [data.Box](#).

6.37.2.3 getStatus()

```
RentableStatus data.Rentable.getStatus ( )
```

6.37.2.4 getStatusStr()

```
String data.Rentable.getStatusStr ( )
```

6.37.2.5 getType()

```
abstract String data.Rentable.getType ( ) [abstract]
```

Reimplemented in [data.Bag](#), and [data.Box](#).

6.37.2.6 setStatus()

```
void data.Rentable.setStatus (
    RentableStatus status_ )
```

6.37.2.7 toJSONString()

```
String data.Rentable.toJSONString ( )
```

Reimplemented in [data.Bag](#), and [data.Box](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/data/Rentable.java](#)

6.38 data.RentableAllocator Class Reference

Public Member Functions

- [Rentable borrowRentable](#) ([Client](#) aClient, String aType) throws ExNoSufficientRentable

Static Public Member Functions

- static [RentableAllocator getInstance](#) ()

6.38.1 Member Function Documentation

6.38.1.1 borrowRentable()

```
Rentable data.RentableAllocator.borrowRentable (
    Client aClient,
    String aType ) throws ExNoSufficientRentable
```

6.38.1.2 getInstance()

```
static RentableAllocator data.RentableAllocator.getInstance ( ) [static]
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RentableAllocator.java](#)

6.39 data.RentableManager Class Reference

Public Member Functions

- void [addNewRentable](#) ([Rentable](#) aRentable)
- void [deleteRentable](#) ([Rentable](#) aRentable)

Static Public Member Functions

- static [RentableManager](#) [getInstance](#) ()

6.39.1 Member Function Documentation

6.39.1.1 addNewRentable()

```
void data.RentableManager.addNewRentable (
    Rentable aRentable )
```

6.39.1.2 deleteRentable()

```
void data.RentableManager.deleteRentable (
    Rentable aRentable )
```

6.39.1.3 getInstance()

```
static RentableManager data.RentableManager.getInstance ( ) [static]
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/RentableManager.java

6.40 data.RentableSearcher Class Reference

Public Member Functions

- [Rentable searchByKeyword](#) (String rentableId)
- [ArrayList< Rentable > searchAllByKeyword](#) (String type)

Static Public Member Functions

- static [RentableSearcher getInstance](#) ()

6.40.1 Detailed Description

Author

lixiaoyang

6.40.2 Member Function Documentation

6.40.2.1 getInstance()

```
static RentableSearcher data.RentableSearcher.getInstance ( ) [static]
```

6.40.2.2 searchAllByKeyword()

```
ArrayList< Rentable > data.RentableSearcher.searchAllByKeyword (
    String type )
```

6.40.2.3 searchByKeyword()

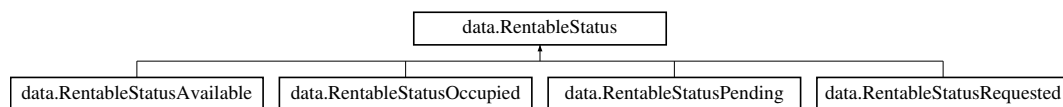
```
Rentable data.RentableSearcher.searchByKeyword (
    String rentableId )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RentableSearcher.java](#)

6.41 data.RentableStatus Interface Reference

Inheritance diagram for data.RentableStatus:



Public Member Functions

- String [toString](#) ()
- String [getStatus](#) ()
- String [toJSONString](#) ()

6.41.1 Member Function Documentation

6.41.1.1 getStatus()

```
String data.RentableStatus.getStatus ( )
```

Implemented in [data.RentableStatusAvailable](#), [data.RentableStatusOccupied](#), [data.RentableStatusPending](#), and [data.RentableStatusRequested](#).

6.41.1.2 toJSONString()

```
String data.RentableStatus.toJSONString ( )
```

Implemented in [data.RentableStatusAvailable](#), [data.RentableStatusOccupied](#), [data.RentableStatusPending](#), and [data.RentableStatusRequested](#).

6.41.1.3 toString()

```
String data.RentableStatus.toString ( )
```

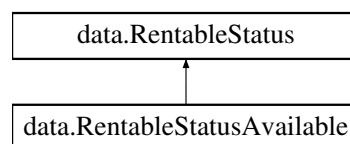
Implemented in [data.RentableStatusAvailable](#), [data.RentableStatusOccupied](#), [data.RentableStatusPending](#), and [data.RentableStatusRequested](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/data/RentableStatus.java](#)

6.42 data.RentableStatusAvailable Class Reference

Inheritance diagram for data.RentableStatusAvailable:



Public Member Functions

- [RentableStatusAvailable](#) ()
- String [toString](#) ()
- String [getStatus](#) ()
- String [toJSONString](#) ()

Static Public Attributes

- static final String [statusName](#) = "Available"

6.42.1 Constructor & Destructor Documentation

6.42.1.1 RentableStatusAvailable()

```
data.RentableStatusAvailable.RentableStatusAvailable ( )
```

6.42.2 Member Function Documentation

6.42.2.1 getStatus()

```
String data.RentableStatusAvailable.getStatus ( )
```

Implements [data.RentableStatus](#).

6.42.2.2 toJSONString()

```
String data.RentableStatusAvailable.toJSONString ( )
```

Implements [data.RentableStatus](#).

6.42.2.3 toString()

```
String data.RentableStatusAvailable.toString ( )
```

Implements [data.RentableStatus](#).

6.42.3 Member Data Documentation

6.42.3.1 statusName

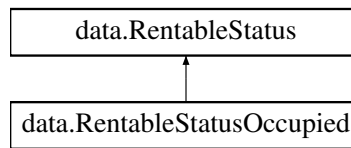
```
final String data.RentableStatusAvailable.statusName = "Available" [static]
```

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

- [/Users/lixiaoyang/git/xBox/xBox/src/data/RentableStatusAvailable.java](#)

6.43 data.RentableStatusOccupied Class Reference

Inheritance diagram for data.RentableStatusOccupied:



Public Member Functions

- [RentableStatusOccupied](#) (Date day_, [Client](#) client_)
- String [toString](#) ()
- String [getStatus](#) ()
- String [toJSONString](#) ()

Static Public Attributes

- static final String [statusName](#) = "Occupied"

6.43.1 Constructor & Destructor Documentation

6.43.1.1 RentableStatusOccupied()

```
data.RentableStatusOccupied.RentableStatusOccupied (
    Date day_,
    Client client_ )
```

6.43.2 Member Function Documentation

6.43.2.1 getStatus()

```
String data.RentableStatusOccupied.getStatus ( )
```

Implements [data.RentableStatus](#).

6.43.2.2 toJSONString()

```
String data.RentableStatusOccupied.toJSONString ( )
```

Implements [data.RentableStatus](#).

6.43.2.3 toString()

```
String data.RentableStatusOccupied.toString ( )
```

Implements [data.RentableStatus](#).

6.43.3 Member Data Documentation

6.43.3.1 statusName

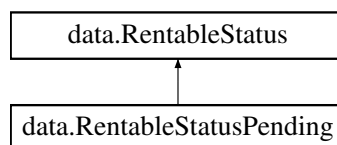
```
final String data.RentableStatusOccupied.statusName = "Occupied" [static]
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RentableStatusOccupied.java](#)

6.44 data.RentableStatusPending Class Reference

Inheritance diagram for data.RentableStatusPending:



Public Member Functions

- [RentableStatusPending](#) ([Client](#) aClient)
- String [toString](#) ()
- String [getStatus](#) ()
- String [toJSONString](#) ()

Static Public Attributes

- static final String [statusName](#) = "Pending"

6.44.1 Detailed Description

Author

lixiaoyang

6.44.2 Constructor & Destructor Documentation

6.44.2.1 RentableStatusPending()

```
data.RentableStatusPending.RentableStatusPending (
    Client aClient )
```

6.44.3 Member Function Documentation

6.44.3.1 getStatus()

```
String data.RentableStatusPending.getStatus ( )
```

Implements [data.RentableStatus](#).

6.44.3.2 toJSONString()

```
String data.RentableStatusPending.toJSONString ( )
```

Implements [data.RentableStatus](#).

6.44.3.3 toString()

```
String data.RentableStatusPending.toString ( )
```

Implements [data.RentableStatus](#).

6.44.4 Member Data Documentation

6.44.4.1 statusName

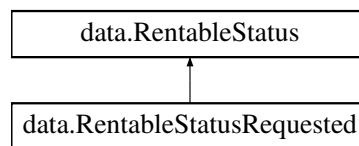
```
final String data.RentableStatusPending.statusName = "Pending" [static]
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RentableStatusPending.java](#)

6.45 data.RentableStatusRequested Class Reference

Inheritance diagram for data.RentableStatusRequested:



Public Member Functions

- [RentableStatusRequested](#) ([Client](#) aClient)
- String [toString](#) ()
- String [getStatus](#) ()
- String [toJSONString](#) ()

Static Public Attributes

- static final String [statusName](#) = "Requested"

6.45.1 Constructor & Destructor Documentation

6.45.1.1 RentableStatusRequested()

```
data.RentableStatusRequested.RentableStatusRequested (  
    Client aClient )
```

6.45.2 Member Function Documentation

6.45.2.1 getStatus()

```
String data.RentableStatusRequested.getStatus ( )
```

Implements [data.RentableStatus](#).

6.45.2.2 toJSONString()

```
String data.RentableStatusRequested.toJSONString ( )
```

Implements [data.RentableStatus](#).

6.45.2.3 toString()

```
String data.RentableStatusRequested.toString ( )
```

Implements [data.RentableStatus](#).

6.45.3 Member Data Documentation

6.45.3.1 statusName

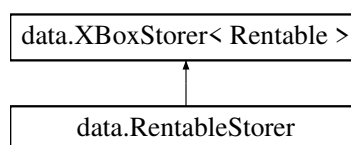
```
final String data.RentableStatusRequested.statusName = "Requested" [static]
```

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

- [/Users/lixiaoyang/git/xBox/xBox/src/data/RentableStatusRequested.java](#)

6.46 data.RentableStorer Class Reference

Inheritance diagram for data.RentableStorer:



Public Member Functions

- `HashMap< String, ArrayList< Rentable > > getManager ()`
- `ArrayList< Rentable > getList (String rentableType)`
- `void addEntry (Rentable entry)`
- `void delEntry (Rentable entry)`
- `void readFromJson (String filePathName) throws IOException`
- `void writeToJson (String filePathName) throws IOException`

Static Public Member Functions

- `static RentableStorer getInstance ()`
- `static Rentable getRentableByJSONObject (JSONObject jsonObject)`
- `static JSONObject putRentableToJSONObject (Rentable r)`

6.46.1 Member Function Documentation

6.46.1.1 addEntry()

```
void data.RentableStorer.addEntry (  
    Rentable entry )
```

6.46.1.2 delEntry()

```
void data.RentableStorer.delEntry (  
    Rentable entry )
```

6.46.1.3 getInstance()

```
static RentableStorer data.RentableStorer.getInstance ( ) [static]
```

6.46.1.4 getList()

```
ArrayList< Rentable > data.RentableStorer.getList (  
    String rentableType )
```

6.46.1.5 getManager()

```
HashMap< String, ArrayList< Rentable > > data.RentableStorer.getManager ( )
```

6.46.1.6 getRentableByJSONObject()

```
static Rentable data.RentableStorer.getRentableByJSONObject (
    JSONObject jsonObject ) [static]
```

6.46.1.7 putRentableToJSONObject()

```
static JSONObject data.RentableStorer.putRentableToJSONObject (
    Rentable r ) [static]
```

6.46.1.8 readFromJson()

```
void data.RentableStorer.readFromJson (
    String filePathName ) throws IOException
```

6.46.1.9 writeToJson()

```
void data.RentableStorer.writeToJson (
    String filePathName ) throws IOException
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RentableStorer.java](#)

6.47 data.Request Class Reference

Public Member Functions

- [Request](#) ()
- [Request](#) ([Client](#) aClient, [Rentable](#) aRentable, Date aDate)
- [Client](#) getClient ()
- void [setClient](#) ([Client](#) aClient)
- [Rentable](#) getRentable ()
- void [setRentable](#) ([Rentable](#) aRentable)
- Date [getDue](#) ()
- String [toString](#) ()
- String [toJSONString](#) ()

6.47.1 Constructor & Destructor Documentation

6.47.1.1 Request() [1/2]

```
data.Request.Request ( )
```

6.47.1.2 Request() [2/2]

```
data.Request.Request (
    Client aClient,
    Rentable aRentable,
    Date aDate )
```

6.47.2 Member Function Documentation

6.47.2.1 getClient()

```
Client data.Request.getClient ( )
```

6.47.2.2 getDue()

```
Date data.Request.getDue ( )
```

6.47.2.3 getRentable()

```
Rentable data.Request.getRentable ( )
```

6.47.2.4 setClient()

```
void data.Request.setClient (
    Client aClient )
```

6.47.2.5 setRentable()

```
void data.Request.setRentable (
    Rentable aRentable )
```

6.47.2.6 toJSONString()

```
String data.Request.toJSONString ( )
```

6.47.2.7 toString()

```
String data.Request.toString ( )
```

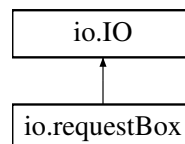
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/data/[Request.java](#)

6.48 io.requestBox Class Reference

request

Inheritance diagram for io.requestBox:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.48.1 Detailed Description

request

Author

dongjiajie

UI Interface for user function [request]

6.48.2 Member Function Documentation

6.48.2.1 load()

```
static void io.requestBox.load ( ) [static]
```

6.48.2.2 show()

```
JPanel io.requestBox.show ( )
```

Implements [io.IO](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/io/requestBox.java](#)

6.49 data.RequestManager Class Reference

Public Member Functions

- void [newRequest](#) ([Request](#) request)
- void [removeRequest](#) ([Request](#) request)

Static Public Member Functions

- static [RequestManager](#) [getInstance](#) ()

6.49.1 Member Function Documentation

6.49.1.1 getInstance()

```
static RequestManager data.RequestManager.getInstance ( ) [static]
```

6.49.1.2 newRequest()

```
void data.RequestManager.newRequest (
    Request request )
```

6.49.1.3 removeRequest()

```
void data.RequestManager.removeRequest (
    Request request )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RequestManager.java](#)

6.50 data.RequestSearcher Class Reference

Public Member Functions

- ArrayList< [Request](#) > [searchAll](#) ()
- ArrayList< [Request](#) > [searchAllByKeyword](#) ([Client](#) aClient)
- [Request](#) [searchByKeyword](#) (String aID)

Static Public Member Functions

- static [RequestSearcher](#) [getInstance](#) ()

6.50.1 Member Function Documentation

6.50.1.1 getInstance()

```
static RequestSearcher data.RequestSearcher.getInstance ( ) [static]
```

6.50.1.2 searchAll()

```
ArrayList< Request > data.RequestSearcher.searchAll ( )
```

6.50.1.3 searchAllByKeyword()

```
ArrayList< Request > data.RequestSearcher.searchAllByKeyword (
    Client aClient )
```

6.50.1.4 searchByKeyword()

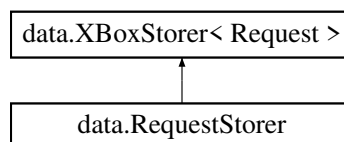
```
Request data.RequestSearcher.searchByKeyword (
    String aID )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RequestSearcher.java](#)

6.51 data.RequestStorer Class Reference

Inheritance diagram for data.RequestStorer:



Public Member Functions

- ArrayList< Request > [getList](#) ()
- void [addEntry](#) (Request request_)
- void [delEntry](#) (Request request_)
- void [readFromJson](#) (String filePathName) throws IOException
- void [writeToJson](#) (String filePathName) throws IOException

Static Public Member Functions

- static RequestStorer [getInstance](#) ()
- static Request [getRequestByJsonObject](#) (JSONObject jsonObject)
- static JSONObject [putRequestToJsonObject](#) (Request r)

6.51.1 Member Function Documentation

6.51.1.1 addEntry()

```
void data.RequestStorer.addEntry (
    Request request_ )
```

6.51.1.2 delEntry()

```
void data.RequestStorer.delEntry (
    Request request_ )
```

6.51.1.3 getInstance()

```
static RequestStorer data.RequestStorer.getInstance ( ) [static]
```

6.51.1.4 getList()

```
ArrayList< Request > data.RequestStorer.getList ( )
```

6.51.1.5 getRequestByJSONObject()

```
static Request data.RequestStorer.getRequestByJSONObject (
    JSONObject jsonObject ) [static]
```

6.51.1.6 putRequestToJSONObject()

```
static JSONObject data.RequestStorer.putRequestToJSONObject (
    Request r ) [static]
```

6.51.1.7 readFromJson()

```
void data.RequestStorer.readFromJson (
    String filePathName ) throws IOException
```

6.51.1.8 writeToJson()

```
void data.RequestStorer.writeToJson (
    String filePathName ) throws IOException
```

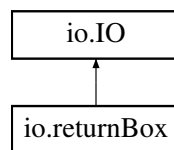
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/data/[RequestStorer.java](#)

6.52 io.returnBox Class Reference

return

Inheritance diagram for io.returnBox:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.52.1 Detailed Description

return

Author

dongjiajie

UI Interface for user function [return]

6.52.2 Member Function Documentation

6.52.2.1 load()

```
static void io.returnBox.load ( ) [static]
```

6.52.2.2 show()

```
JPanel io.returnBox.show ( )
```

Implements [io.IO](#).

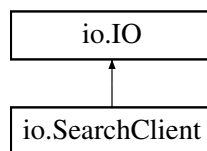
The documentation for this class was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/io/returnBox.java](#)

6.53 io.SearchClient Class Reference

Search Client.

Inheritance diagram for io.SearchClient:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.53.1 Detailed Description

Search Client.

Author

dongjiajie

UI Interface for admin function [searchClient]

6.53.2 Member Function Documentation

6.53.2.1 load()

```
static void io.SearchClient.load ( ) [static]
```

6.53.2.2 show()

```
JPanel io.SearchClient.show ( )
```

Implements [io.IO](#).

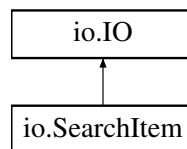
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/io/[SearchClient.java](#)

6.54 io.SearchItem Class Reference

Search Item.

Inheritance diagram for io.SearchItem:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.54.1 Detailed Description

Search Item.

Author

dongjiajie

UI Interface for admin function [[SearchItem](#)]

6.54.2 Member Function Documentation

6.54.2.1 load()

```
static void io.SearchItem.load ( ) [static]
```

6.54.2.2 show()

```
JPanel io.SearchItem.show ( )
```

Implements [io.IO](#).

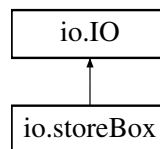
The documentation for this class was generated from the following file:

- [/Users/lixiaoyang/git/xBox/xBox/src/io/SearchItem.java](#)

6.55 io.storeBox Class Reference

store

Inheritance diagram for io.storeBox:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.55.1 Detailed Description

store

Author

dongjiajie

UI Interface for user function [store]

6.55.2 Member Function Documentation

6.55.2.1 load()

```
static void io.storeBox.load ( ) [static]
```

6.55.2.2 show()

```
JPanel io.storeBox.show ( )
```

Implements [io.IO](#).

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

- [/Users/lixiaoyang/git/xBox/xBox/src/io/storeBox.java](#)

6.56 utils.StringUtils Class Reference

Static Public Member Functions

- static String [getExtensionName](#) (String filePathName_)

Static Public Attributes

- static final String [splitLine](#) = "*****"

6.56.1 Detailed Description

Author

lixiaoyang

6.56.2 Member Function Documentation

6.56.2.1 getExtensionName()

```
static String utils.StringUtils.getExtensionName (
    String filePathName_ ) [static]
```

6.56.3 Member Data Documentation

6.56.3.1 splitLine

```
final String utils.StringUtils.splitLine = "*****"  
[static]
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/Utils/[StringUtils.java](#)

6.57 test.TestCmdReqRentable Class Reference

6.57.1 Detailed Description

Author

lixiaoyang Description: test class for CmdRequestRentable

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

- /Users/lixiaoyang/git/xBox/xBox/src/test/[TestCmdReqRentable.java](#)

6.58 test.TestRentable Class Reference

Public Member Functions

- void [TestAllocator](#) ()

6.58.1 Detailed Description

Author

lixiaoyang Description: test class for rentable

6.58.2 Member Function Documentation

6.58.2.1 TestAllocator()

```
void test.TestRentable.TestAllocator ( )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/test/[TestRentable.java](#)

6.59 test.TestStorer Class Reference

Public Member Functions

- void [testRequestStorerWritingtoJson](#) () throws IOException

6.59.1 Member Function Documentation

6.59.1.1 testRequestStorerWritingtoJson()

```
void test.TestStorer.testRequestStorerWritingtoJson ( ) throws IOException
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/test/[TestStorer.java](#)

6.60 test.TestUserInterfaces Class Reference

Public Member Functions

- void [TestRegister](#) ()
- void [TestLoginValid](#) ()
- void [TestLoginWrongPassword](#) ()
- void [TestLoginInexist](#) ()
- void [TestRequestValid](#) ()
- void [TestRequestInsufficient](#) ()
- void [TestStoreValid](#) ()
- void [TestStoreInvalid](#) ()
- void [TestStoreUndoRedo](#) ()
- void [TestReturnValid](#) ()
- void [TestReturnInvalid](#) ()
- void [TestUndo](#) ()
- void [TestRedo](#) ()
- void [TestSummary](#) ()

6.60.1 Detailed Description

Author

lixiaoyang

6.60.2 Member Function Documentation

6.60.2.1 TestLoginInexist()

```
void test.TestUserInterfaces.TestLoginInexist ( )
```

6.60.2.2 TestLoginValid()

```
void test.TestUserInterfaces.TestLoginValid ( )
```

6.60.2.3 TestLoginWrongPassword()

```
void test.TestUserInterfaces.TestLoginWrongPassword ( )
```

6.60.2.4 TestRedo()

```
void test.TestUserInterfaces.TestRedo ( )
```

6.60.2.5 TestRegister()

```
void test.TestUserInterfaces.TestRegister ( )
```

6.60.2.6 TestRequestInsufficient()

```
void test.TestUserInterfaces.TestRequestInsufficient ( )
```

6.60.2.7 TestRequestValid()

```
void test.TestUserInterfaces.TestRequestValid ( )
```

6.60.2.8 TestReturnInvalid()

```
void test.TestUserInterfaces.TestReturnInvalid ( )
```

6.60.2.9 TestReturnValid()

```
void test.TestUserInterfaces.TestReturnValid ( )
```

6.60.2.10 TestStoreInvalid()

```
void test.TestUserInterfaces.TestStoreInvalid ( )
```

6.60.2.11 TestStoreUndoRedo()

```
void test.TestUserInterfaces.TestStoreUndoRedo ( )
```

6.60.2.12 TestStoreValid()

```
void test.TestUserInterfaces.TestStoreValid ( )
```

6.60.2.13 TestSummary()

```
void test.TestUserInterfaces.TestSummary ( )
```

6.60.2.14 TestUndo()

```
void test.TestUserInterfaces.TestUndo ( )
```

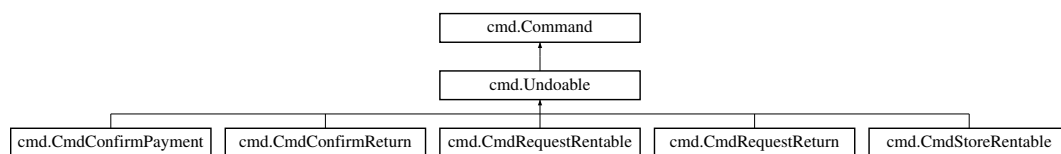
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/test/TestUserInterfaces.java

6.61 cmd.Undoable Class Reference

Description for [Undoable.java](#).

Inheritance diagram for cmd.Undoable:



Public Member Functions

- abstract String [undo](#) ()
- abstract String [redo](#) ()

Static Public Member Functions

- static void [clearList](#) ()
- static String [undoCmd](#) () throws ExEmptyVector
undo command
- static String [redoCmd](#) () throws ExEmptyVector
redo command

Static Protected Member Functions

- static void [addUndo](#) ([Undoable](#) cmd)
< This is the redo list to store command objects to redo
- static void [addRedo](#) ([Undoable](#) cmd)

6.61.1 Detailed Description

Description for [Undoable.java](#).

Author

lixiaoyang

This is the abstract class for specific command class to extend, implementing [Command](#) interface. All undoable commands are supposed to extend this class which provides undo and redo functions.

6.61.2 Member Function Documentation

6.61.2.1 addRedo()

```
static void cmd.Undoable.addRedo (  
    Undoable cmd ) [static], [protected]
```

6.61.2.2 addUndo()

```
static void cmd.Undoable.addUndo (  
    Undoable cmd ) [static], [protected]
```

<This is the redo list to store command objects to redo

6.61.2.3 clearList()

```
static void cmd.Undoable.clearList ( ) [static]
```

6.61.2.4 redo()

```
abstract String cmd.Undoable.redo ( ) [abstract]
```

Reimplemented in [cmd.CmdConfirmPayment](#), [cmd.CmdConfirmReturn](#), [cmd.CmdRequestRentable](#), [cmd.CmdRequestReturn](#), and [cmd.CmdStoreRentable](#).

6.61.2.5 redoCmd()

```
static String cmd.Undoable.redoCmd ( ) throws ExEmptyVector [static]
```

redo command

static redo command function for [Undoable](#) class

Returns

string, log to be output

6.61.2.6 undo()

```
abstract String cmd.Undoable.undo ( ) [abstract]
```

Reimplemented in [cmd.CmdConfirmPayment](#), [cmd.CmdConfirmReturn](#), [cmd.CmdRequestRentable](#), [cmd.CmdRequestReturn](#), and [cmd.CmdStoreRentable](#).

6.61.2.7 undoCmd()

```
static String cmd.Undoable.undoCmd ( ) throws ExEmptyVector [static]
```

undo command

static undo command function for [Undoable](#) class

Returns

string, log to be output

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

- [/Users/lixiaoyang/git/xBox/xBox/src/cmd/Undoable.java](#)

6.62 xBox.UserInterfaces Class Reference

User Interface.

Public Member Functions

- boolean [verifyLoginUser](#) (String email)
- [Client](#) [getUser](#) ()
- String [register](#) (String[] cmdLine) throws [ExAccountExists](#), [ExInfoMissing](#)
- String [login](#) (String[] cmdLine) throws [ExEntryNotFound](#), [ExInvalidPassword](#)
- String [summary](#) (String[] cmdLine)
summary
- String [undo](#) () throws [ExEmptyVector](#)
undo
- String [redo](#) () throws [ExEmptyVector](#)
redo
- String [request](#) (String[] cmdLine) throws [ExNoSufficientRentable](#)
request
- String [store](#) (String[] cmdLine) throws [ExEntryNotFound](#)
store
- String [unload](#) (String[] cmdLine) throws [ExEntryNotFound](#)
return

Static Public Member Functions

- static [UserInterfaces](#) [getInstance](#) ()

6.62.1 Detailed Description

User Interface.

Author

lixiaoyang

User interfaces are defined here

6.62.2 Member Function Documentation

6.62.2.1 [getInstance\(\)](#)

```
static UserInterfaces xBox.UserInterfaces.getInstance ( ) [static]
```

6.62.2.2 [getUser\(\)](#)

```
Client xBox.UserInterfaces.getUser ( )
```

6.62.2.3 [login\(\)](#)

```
String xBox.UserInterfaces.login (
    String[] cmdLine ) throws ExEntryNotFound, ExInvalidPassword
```

Parameters

<i>cmdLine</i>	interface parameters [0:email] [1:password]
----------------	---

Exceptions

<i>entry</i>	not found
<i>invalid</i>	password

Returns

string, log to be output

6.62.2.4 redo()

```
String xbox.UserInterfaces.redo ( ) throws ExEmptyVector
```

redo

redo the very last command

6.62.2.5 register()

```
String xbox.UserInterfaces.register (
    String[] cmdLine ) throws ExAccountExists, ExInfoMissing
```

Parameters

<i>cmdLine</i>	interface parameters [0:email] [1:phoneNo] [2:password] [3:type]
----------------	--

Exceptions

<i>Account</i>	exists
<i>Info</i>	missing

Returns

string, log to be output

6.62.2.6 request()

```
String xbox.UserInterfaces.request (
    String[] cmdLine ) throws ExNoSufficientRentable
```

request

user interface for requesting items

6.62.2.7 store()

```
String xbox.UserInterfaces.store (
    String[] cmdLine ) throws ExEntryNotFound
```

store

user interface for storing items

6.62.2.8 summary()

```
String xbox.UserInterfaces.summary (
    String[] cmdLine )
```

summary

summary all items

6.62.2.9 undo()

```
String xbox.UserInterfaces.undo ( ) throws ExEmptyVector
```

undo

undo the very last command

6.62.2.10 unload()

```
String xbox.UserInterfaces.unload (
    String[] cmdLine ) throws ExEntryNotFound
```

return

user interface for returning items

6.62.2.11 verifyLoginUser()

```
boolean xbox.UserInterfaces.verifyLoginUser (
    String email )
```

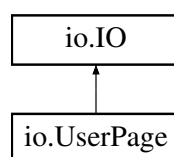
The documentation for this class was generated from the following file:

- /Users/lixiaoyang/git/xBox/xBox/src/xBox/[UserInterfaces.java](#)

6.63 io.UserPage Class Reference

[UserPage](#).

Inheritance diagram for io.UserPage:



Public Member Functions

- JPanel [show](#) ()

Static Public Member Functions

- static void [load](#) ()

6.63.1 Detailed Description

[UserPage](#).

Author

dongjiajie

UI Interface for user page

6.63.2 Member Function Documentation

6.63.2.1 load()

```
static void io.UserPage.load ( ) [static]
```

6.63.2.2 show()

```
JPanel io.UserPage.show ( )
```

Implements [io.IO](#).

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

- /Users/lixiaoyang/git/xBox/xBox/src/io/[UserPage.java](#)

6.64 xBox.Xbox Class Reference

[xBox](#) UI Interface

Public Member Functions

- void [show_page](#) (JPanel a)
- void [show_data](#) (String a)

Static Public Member Functions

- static [Xbox getInstance](#) ()
- static JTextArea [out](#) (String a)
- static void [output](#) (String a)
- static void [error](#) (Exception a)
- static void [main](#) (String[] args)

6.64.1 Detailed Description

[xBox](#) UI Interface

provide UI interface for users and handle data base initialization and json file operation

6.64.2 Member Function Documentation

6.64.2.1 [error\(\)](#)

```
static void xBox.Xbox.error (  
    Exception a ) [static]
```

6.64.2.2 [getInstance\(\)](#)

```
static Xbox xBox.Xbox.getInstance ( ) [static]
```

6.64.2.3 [main\(\)](#)

```
static void xBox.Xbox.main (  
    String[] args ) [static]
```

6.64.2.4 out()

```
static JTextArea xBox.Xbox.out (
    String a ) [static]
```

6.64.2.5 output()

```
static void xBox.Xbox.output (
    String a ) [static]
```

6.64.2.6 show_data()

```
void xBox.Xbox.show_data (
    String a )
```

6.64.2.7 show_page()

```
void xBox.Xbox.show_page (
    JPanel a )
```

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

- [/Users/lixiaoyang/git/xBox/xBox/src/xBox/Xbox.java](#)

6.65 utils.XBoxDate Class Reference

Public Member Functions

- Date [getDayAfterNMonth](#) (String monthString)

Static Public Member Functions

- static [XBoxDate getInstance](#) ()

6.65.1 Detailed Description

Author

lixiaoyang Description: Date utility inherited from java.util.Date

6.65.2 Member Function Documentation

6.65.2.1 getDayAfterNMonth()

```
Date utils.XBoxDate.getDayAfterNMonth (
    String monthString )
```

6.65.2.2 getInstance()

```
static XBoxDate utils.XBoxDate.getInstance ( ) [static]
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/Utils/XBoxDate.java

6.66 data.XBoxStorer< ElemType > Interface Template Reference

storer interface interface provided for data structure to manage insertion and deletion operations

Public Member Functions

- void [addEntry](#) (ElemType entry)
- void [delEntry](#) (ElemType entry)

6.66.1 Detailed Description

storer interface interface provided for data structure to manage insertion and deletion operations

Author

lixiaoyang

6.66.2 Member Function Documentation

6.66.2.1 addEntry()

```
void data.XBoxStorer< ElemType >.addEntry (
    ElemType entry )
```

6.66.2.2 delEntry()

```
void data.XBoxStorer< ElemType >.delEntry (
    ElemType entry )
```

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

- /Users/lixiaoyang/git/xBox/xBox/src/data/XBoxStorer.java

Chapter 7

File Documentation

7.1 /Users/lixiaoyang/git/xBox/xBox/src/app/Main.java File Reference

Classes

- class [app.Main](#)

Packages

- package [app](#)

7.1.1 Detailed Description

This file defines the main class of the project, which is the very start to run the program.

7.2 /Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdConfirmPayment.java File Reference

Classes

- class [cmd.CmdConfirmPayment](#)
admin command: confirm item request

Packages

- package [cmd](#)

7.3 /Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdConfirmReturn.java File Reference

Classes

- class [cmd.CmdConfirmReturn](#)
admin command: confirm return request

Packages

- package [cmd](#)

7.4 /Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdRequestRentable.java File Reference

Classes

- class [cmd.CmdRequestRentable](#)
user command: item request

Packages

- package [cmd](#)

7.5 /Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdRequestReturn.java File Reference

Classes

- class [cmd.CmdRequestReturn](#)
user command: return request

Packages

- package [cmd](#)

7.6 /Users/lixiaoyang/git/xBox/xBox/src/cmd/CmdStoreRentable.java File Reference

Classes

- class [cmd.CmdStoreRentable](#)
user command: store

Packages

- package [cmd](#)

7.7 /Users/lixiaoyang/git/xBox/xBox/src/cmd/Command.java File Reference

Classes

- interface [cmd.Command](#)

Packages

- package [cmd](#)

7.8 /Users/lixiaoyang/git/xBox/xBox/src/cmd/Undoable.java File Reference

Classes

- class [cmd.Undoable](#)
Description for [Undoable.java](#).

Packages

- package [cmd](#)

7.9 /Users/lixiaoyang/git/xBox/xBox/src/data/Bag.java File Reference

Classes

- class [data.Bag](#)

Packages

- package [data](#)

7.10 /Users/lixiaoyang/git/xBox/xBox/src/data/Box.java File Reference

Classes

- class [data.Box](#)

Packages

- package [data](#)

7.11 /Users/lixiaoyang/git/xBox/xBox/src/data/Client.java File Reference

Classes

- class [data.Client](#)

Packages

- package [data](#)

7.12 /Users/lixiaoyang/git/xBox/xBox/src/data/ClientManager.java File Reference

Classes

- class [data.ClientManager](#)

Packages

- package [data](#)

7.13 /Users/lixiaoyang/git/xBox/xBox/src/data/ClientSearcher.java File Reference

Classes

- class [data.ClientSearcher](#)

Packages

- package [data](#)

7.14 /Users/lixiaoyang/git/xBox/xBox/src/data/ClientStaff.java File Reference

Classes

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