Guideline: StorageBox Utility
(Java & Php) version 1.2

StorageBox Utility Class

[Provided with fincom.jar]

```
package com.finlogic.util.sbutility;

public class StorageBoxImpl
{
        ...
        // Protected Parameterized Constructor
        protected StorageBoxImpl(int projectId)

        // Protected Methods
        protected String getFile(String sbFilePath) throws IllegalArgumentException,
                                UnsupportedEncodingException, IOException

        protected void putFile(PutFileBean putFileBean) throws Exception

        protected boolean deleteFile(String sbFilePath) throws Exception

        protected boolean isFileExist(String sbFilePath) throws Exception

        protected List<SBFileBean> getList(String sbDirPath) throws IllegalArgumentException,
                                UnsupportedEncodingException, IOException
        ...
}
```

How To Use

Dependencies:

Java   -   get updated **fincom.jar** and set in classpath.
Php   -   get FinFunction.inc (updated),
                        StorageBoxImpl.inc,
                        PutFileBean.inc,
                        SBFileBean.inc from samba share - devweb3.nj/html/sbutility

Property File Update
Add below required properties:

[to use localdisk as storagebox - developer's machine]

sbgetagent=file:///opt/application_storage/storage_box/
sbputagent=file:///opt/application_storage/storage_box/
sbdeleteagent=file:///opt/application_storage/storage_box/
sbisexistagent=file:///opt/application_storage/storage_box/
sblistagent=file:///opt/application_storage/storage_box/

Note:
/opt/application_storage/storage_box/ path in above property interprets as local storagebox path

Create below directories and provide full rights. (if not exists)
/opt/application_storage/storage_box/
/opt/application_storage/temp_files/cache/

[to use dev storagebox]

sbgetagent=http://192.168.3.80:8081
sbputagent=http://192.168.3.80:8081
sbdeleteagent=http://192.168.3.80:8081
sbisexistagent=http://192.168.3.80:8081
sblistagent=http://192.168.3.80:8081

Note:
Confirm below property exists
tempfiles_path=/opt/application_storage/temp_files/

Create below directory and provide full rights. (if not exists)
/opt/application_storage/temp_files/cache/

Storage Box Operator Class   [Common for all storage box operations from a project]

As shown below, **create** a **class** once for a project and use the same while require any operation with storagebox.

JAVA

```java
import com.finlogic.util.sbutility.PutFileBean;
import com.finlogic.util.sbutility.StorageBoxImpl;
import java.io.IOException;
import java.io.UnsupportedEncodingException;

public class SBCommonOperation extends StorageBoxImpl
{
   private static SBCommonOperation sbCommon = new sbCommonOperation();

   private SBCommonOperation()
   {
     super(0);  // Must-  provide project id
   }

    public static SBCommonOperation getSBCommonOperation()
   {
     return sbCommon;
    }

  @Override
   public String getFile(String sbFilePath) throws IllegalArgumentException,
UnsupportedEncodingException, IOException
   {
     return super.getFile(sbFilePath);
   }

   @Override
   public void putFile(PutFileBean putFileBean) throws Exception
   {
      super.putFile(putFileBean);
   }

   @Override
   public boolean deleteFile(String sbFilePath) throws Exception
   {
     return super.deleteFile(sbFilePath);
   }

  @Override
   public boolean isFileExist(String sbFilePath) throws Exception
   {
       return super.isFileExist(sbFilePath);
   }

   @Override
   public List<SBFileBean> getList(String sbDirPath) throws IllegalArgumentException,
UnsupportedEncodingException, IOException
   {
     return super.getList(sbDirPath);
   }
}
```

- Get instance of SBCommonOperation class
  SBCommonOperation sbCommon = SBCommonOperation.getsbCommonOperation();

- Available methods-
  sbCommon.getFile(), sbCommon.putFile(), sbCommon.deleteFile(), sbCommon.isFileExist(),
  sbCommon.getList()

PHP

```php
<?php
include '/var/www/html/sbutility/StorageBoxImpl.inc';
include '/var/www/html/sbutility/PutFileBean.php';

class SBCommonOperation extends StorageBoxImpl {

  private static $sbCommon;

  protected function __construct() {
    parent::__construct(0); // Must-  provide project id
  }

  public function getSbCommonOperation() {
      if(!is_object(self::$sbCommon)) {
              self::$sbCommon = new SBCommonOperation();
      }

      return self::$sbCommon;
  }

  public function getFile($filepath) {
    return parent::getFile($filepath);
  }

  public function putFile($putFileBn) {
    return parent::putFile($putFileBn);
  }

  public function deleteFile($sbFilePath) {
    return parent::deleteFile($sbFilePath);
  }

  public function isFileExist($sbFilePath) {
    return parent::isFileExist($sbFilePath);
  }

  public function getList($sbDirPath) {
    return parent::getList($sbDirPath);
  }
}
?>
```

- Get instance of SBCommonOperation class
  $sbCommon = SBCommonOperation::getsbCommonOperation();

- Available methods-
  sbCommon->getFile(), sbCommon->putFile(), sbCommon->deleteFile(), sbCommon->isFileExist(),
  sbCommon->getList()

Functionality

Methods

1. getFile

Input Parameter

Name	Datatype	Description	Example
sbFilePath	String	provide relative path of storagebox file	sbFilePath="TRADING/capitalmarket/basket_order/0605/ORD060515182201.xls"

Output Parameter

Name	Datatype	Description	Example
localFilePath	String	returns absolute local file path that received from storagebox File will be placed at-/opt/application_storage/temp_files/cache/ **Note: It's compulsory to delete file from returned local filepath as you are done with its usage.**	/opt/application_storage/temp_files/cache/cache-22098894664517/ORD060515182201.xls

Validations

Sr No.	Exception	Description	Example
1.	IllegalArgument	provided null or empty input parameter- sbFilePath	sbFilePath= null sbFilePath=" "
2.	IllegalArgument	when provided sbFilePath is not a relative path	sbDirPath="/opt/application_storage/storage_box/TRADING/capitalmarket/basket_order/ORD060515182201.xls"
3.	IllegalArgument	when requested file is not a file	sbFilePath="TRADING/capitalmarket/basket_order/0605/"
4.	FileNotFound	when requested storagebox file is not available on storagebox	-
5.	IOException	when requested empty file	TRADING/capitalmarket/basket_order/ORD060515182201.xls is empty file with size 0.
6.	IllegalState	storagebox is not available for get operation	when manually make storagebox unavailable for maintenance.

2. putFile

Input Parameter

Name	Datatype	Description	Example
putFileBean	PutFileBean	provide PutFileBean with mandatory values	-

PutFileBean

Name	Datatype	Description	Example
sourceFile	File	set file objecs of absolute local filepath need to be uploaded on storagebox	putFileBean.setSourceFile(new File("/opt/application_storage/temp_files/trading/basket_order/0605/ORD060515182201.xls")
sbDestPath	String	set relative destination storagebox filepath to upload file at.	TRADING/capitalmarket/basket_order/0605/123BQ123.xls
removeFromSource	boolean	true – remove source file after successful fileupload at storagebox false – do not remove source file after successful fileupload at storagebox (Default: true)	true / false
overwrite	boolean	true – overwrite file on storagebox if exist false – do notoverwrite file on storagebox if exist (Default: true)	true / false

Output Parameter

Name	Datatype	Description	Example
-	-	-	-

Validations

Sr No.	Exception	Description	Example
1.	IllegalArgument	source file object is not provided while requesting file upload	-
2.	IllegalArgument	when source filepath is not start with /opt/application_storage/temp_files/	putFileBean.setSourceFile(new File("/opt/apache-tomcat1/webapps/trading/basket_order/0605/ORD060515182201.xls")
3.	IllegalArgument	provided sourcefile object is not a file	putFileBean.setSourceFile(new File("/opt/apache-tomcat1/webapps/trading/basket_order/0605")
4.	IllegalArgument	provided sourcefile object refers to empty file that requested to upload	-
5.	IllegalArgument	provided null or empty destination storagebox file path	putFileBean.setSbDestPath(" ");

6.	IllegalArgument	when provided sbDestPath is not a relative path	sbDirPath="/opt/application_storage/storage_box/TRADING/capitalmarket/basket_order/ORD060515182201.xls"
7.	IllegalArgument	provided destination filename contains special charcters or space. **Note:** allowed characters: A-Z, a-z, 0-9, "-", "_" , "^" , "." filename should not be start with "^" , "-" or "." max. filename length should be 75 characters.	sbDirPath="/opt/application_storage/storage_box/TRADING/capitalmarket/basket_order/ORD$060515182201.xls"
8.	IllegalArgument	provided sbDestPath is not a file	putFileBean.setSbDestPath("TRADING/capitalmarket/basket_order/0605.2015/");
9.	IllegalArgument	if root dir on storagebox not exist. for shown example, TRADING1 is not exist on Storagebox. if subfolders are not exist, It will be created.	putFileBean.setSbDestPath("TRADING1/capitalmarket/basket_order/0605.2015/");
10.	IllegalArgument	if subfolders are not exist it will be created only if their name is valid. Dir name is not valid if it contains special characters.	putFileBean.setSbDestPath("TRADING/capitalmarket/XY~Z/PQ$12/123.xls");
11.	IllegalState	storagebox is not available for put operation	when manually make storagebox unavailable for maintenance purpose

3. deleteFile

Input Parameter

Name	Datatype	Description	Example
sbFilePath	String	provide relative path of storagebox file	sbFilePath="TRADING/capitalmarket/basket_order/0605/ORD060515182201.xls"

Output Parameter

Name	Datatype	Description	Example
status	boolean	returns true / false true – if deleted false – if not deleted	true / false

Validations

Sr No.	Exception	Description	Example
1.	IllegalArgument	provided null or empty input parameter- sbFilePath	sbFilePath= null sbFilePath=" "
2.	IllegalArgument	when provided sbFilePath is not a relative path	sbDirPath="/opt/application_storage/storage_box/TRADING/capitalmarket/basket_order/ORD060515182201.xls"
3.	IllegalArgument	requested to delete file on storagebox that is not exist.	-
4.	IllegalArgument	requested to delete file on storagebox- provided filepath that does not refers to a file.	sbFilePath="TRADING/capitalmarket/basket_order/0605/"
5.	IllegalState	storagebox is not available for deleteFile operation	when manually make storagebox unavailable for maintenance purpose

4. isFileExist

Input Parameter

Name	Datatype	Description	Example
sbFilePath	String	provide relative path of storagebox file	sbFilePath="TRADING/capitalmarket/basket_order/0605/ORD060515182201.xls"

Output Parameter

Name	Datatype	Description	Example
status	boolean	Returns true / false true – if exist on storagebox false – if not exist on storagebox	true / false

Validations

Sr No.	Exception	Description	Example
1.	IllegalArgument	provided null or empty input parameter- sbFilePath	sbFilePath= null sbFilePath=" "
2.	IllegalArgument	when provided sbFilePath is not a relative path	sbDirPath="/opt/application_storage/storage_box/TRADING/capitalmarket/basket_order/ORD060515182201.xls"
3.	IllegalArgument	requested to check availability of a filepath that does not refers to a file.	sbFilePath="TRADING/capitalmarket/basket_order/0605/"
4.	IllegalState	storagebox is not available for isFileExist operation	when manually make storagebox unavailable for maintenance purpose

5. getList   - provides contents's detail of storagebox directory.

Input Parameter

Name	Datatype	Description	Example
sbDirPath	String	provide relative path of storagebox directory.	sbDirPath="TRADING/ca pitalmarket"

Output Parameter

Name	Datatype	Description	Example
List<SBFileBean>	SBFileBean	returns detail of contents underlying the specified sbDirPath directory.	returns List<SBFileBean> with x no. of SBFileBean objects. (x=no. of contents in Trading/captialmarket)

SBFileBean

Name	Datatype	Description	Example
sbFileName	String	content's relative path on storage box	TRADING/capitalmarket/b asket_order
sbFileType	String	type of content (possible values- File / Directory)	Directory
sbFileLength	long	size of content.(if directory, it will always be zero)	0
sbFileLastModified	long	last modified time of content	1430916720000

Validations

Sr No.	Exception	Description	Example
1.	IllegalArgument	provided null or empty input parameter- sbDirPath	sbDirPath= null sbDirPath=" "
2.	IllegalArgument	when provided sbDirPath is not a relative path	sbDirPath="/opt/applicatio n_storage/storage_box/T RADING/capitalmarket"
3.	IllegalArgument	when provided sbDirPath is not a directory	sbFilePath="TRADING/ca pitalmarket/basket_order/ 0605/sample.txt"
4.	FileNotFound	when provided sbDirPath is not exist.	-
5.	IllegalState	storagebox is not available for list operation	when manually make storagebox unavailable for maintenance.

JAVA Client Class

```java
import com.finlogic.util.sbutility.PutFileBean;
import com.finlogic.util.sbutility.StorageBoxImpl;
import java.io.File;

public class Sbclient
{
   public static void main(String[] args)
   {
         SBCommonOperation sbCommon = SBCommonOperation.getSBCommonOperation ();
      try
      {
        //GETFILE
        String receivedPath =
         sbCommon.getFile("TRADING/capitalmarket/basket_order/0605/ORD060515182201.xls");

         System.out.println("getFile: Returned path- " + receivedPath);

        //PUTFILE
        File sourceFile = new File("/opt/apache-tomcat1/webapps/trading/basket/ORD060515182201.xls");
        String sbDestPath = "TRADING/capitalmarket/ORD060515182201.xls";
        PutFileBean putFileBean = new PutFileBean();
        putFileBean.setSourceFile(sourceFile);
        putFileBean.setSbDestPath(sbDestPath);
        putFileBean.setRemoveFromSource(true);
        putFileBean.setOverwrite(true);
        sbCommon.putFile(putFileBean);

        //IS FILE EXIST
        boolean status =
         sbCommon.isFileExist("TRADING/capitalmarket/basket_order/ORD060515182201.xls");
         System.out.println("status:::" + status);

        //DELETEFILE
        boolean status1 =
         sbCommon .deleteFile("TRADING/capitalmarket/basket_order/ORD060515182201.xls");
         System.out.println("status:::" + status1);

        //LISTFILES
        List<SBFileBean> sBeanList = sbCommon.getList("TRADING/capitalmarket");
        for (SBFileBean sBean : sBeanList)
        {
                  System.out.println("filepath: "+sBean.getSbFileName());
                  System.out.println("filetype: "+sBean.getSbFileType());
                  System.out.println("file size:"+sBean.getSbFileLength());
                  System.out.println("file last modified:"+sBean.getSbFileLastModified());
        }

     } catch (Exception e)
      {
        e.printStackTrace();
      }
   }
}
```

PHP Client Class

```php
<?php
include_once '/var/www/html/sbutility/SBCommonOperation.php';

$sbClient=SBCommonOperation::getSbCommonOperation();
try {

    //GETFILE
    $receivedPath = $sbClient->getFile('pdesk/cdesk/samp.txt');
    echo 'getFile: Returned path- ' . $receivedPath;


    //PUTFILE
    $sourceFile = '/opt/application_storage/temp_files/cdesk/ajax_functions.js';
    $sbDestPath = 'pdesk/tempcheck/ajax_functions.js';
    $putFileBean = new PutFileBean();
    $putFileBean->setSourceFile($sourceFile);
    $putFileBean->setSbDestPath($sbDestPath);
    $putFileBean->setRemoveFromSource(FALSE);
    $putFileBean->setOverwrite(TRUE);
    echo $sbClient->putFile($putFileBean);


    //ISFILEEXIST
    $status = $sbClient->isFileExist('pdesk/tempcheck/emptyfile.txt');
    echo "status:::" . $status;


    //DELETEFILE
    $status1 = $sbClient->deleteFile("TRADING/capitalmarket/basket_order/ORD060515182201.xls");
    echo "status:::" . $status1;


    //LISTFILES
    $var = $sbClient->getList('pdesk/tempcheck');
    $sbobj = new SBFileBean();
    for ($i = 0; $i < count($var); $i++) {
        $sbobj = $var[$i];
        $filepath = $sbobj->getSbFileName();
        $typeoffile = $sbobj->getSbFileType();
        $filelength = $sbobj->getSbFileLength();
        $lastmodified = $sbobj->getSbFileLastModified();
        echo '<br>filepath--> ' . $filepath;
        echo '<br>type of file--> ' . $typeoffile;
        echo '<br>filelength--> ' . $filelength;
        echo '<br>lastmodified--> ' . $lastmodified;
    }
} catch (Exception $e) {
    echo $e->getMessage();
}

?>
```