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| Hamid Hooshmandi  Assignment 3  Thursday, March 7, 2013 |
| **Program Description:** |
| The program contains following packages and classes: |
| C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image001.jpg |
| **Server Package:** |
| DecoderServerSide.java  Decode messages coming from the client |
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| **Client Package:** |
| DecoderClientSide.java  Decode messages coming from the server |
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| **Message Package:** |
| **Decoder:** |
| **getMessage function:** |
| * + gets the InputStream and returns a Message object containing message byte array   + it also return back the inputstream, to be later used for reading messages with body contents     public static Message getMessage**(**InputStream in**,** boolean containsBody**)** **throws** IOException**{**  **.**  **.**  **.**  **.**  msg**.**setOutputStm**(**messageBuffer**.**toByteArray**());**  **return** msg**;**  **}** |
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| **Synchronization:** |
| to synchronze files ,3 arraylists of myFile type is created    ArrayList<myFiles> filesListSnapshot  ArrayList<myFiles> filesListClient  ArrayList<myFiles> fileListServer    filled with files of client, server, and snapshot files,(Snapshot file is an xml file. Representing files on the client computer ) these files then compared together in the **compareFileLists** function.  The function does the following  **compareFileLists function:**   * + gets 3 arraylists of myFile type and compare them together,   + it returns another arraylist of myFile type, with a code corresponding to each filename, indicating what has to be done to the file   + example: 001 means file exists on the server but doesn't exist on the snapshot or the client      |  |  |  |  |  | | --- | --- | --- | --- | --- | | snapshot | Client | Server |  |  | | 1 | 1 | 0 | Delete file on the client |  | | 1 | 0 | 1 | Delete file on the server |  | | 1 | 1 | 1 | Compare |  | | 1 | 0 | 0 |  | File was deleted on both client and server | |  |  |  |  |  | | 0 | 1 | 0 | Put file on the server |  | | 0 | 1 | 1 |  | File was created on both client and server | |  |  |  |  |  | | 0 | 0 | 1 | Get file from the server |  | |  |  |  |  |  | |

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| **Test cases:** |  |  |
| **Login test** |  |  |
| I tested clients and server on "localhost"  run the server with following command line arguments:  -p 20112    Run the client with the following command line arguments:  -d ./CLIENT\_SHARE\_DIR -p 20112 -u username -q password |  |  |
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| Results: |  |  |
|  | Client | Server |
|  | -------SERVER------  DROP/1.0 LOG 200 ok | -------Client------  LOG DROP/1.0  Authorization:username:password |
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| **Synchronization Test** |  |  |
| Synchronization is done manually with an "s" command from the client |  |  |
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| Snapshot file | Client | Server |
| C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image001.jpg | C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image002.jpg | C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image003.jpg |
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| Next I created a new file on the client and issued the synch command |  |  |
|  | C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image004.jpg |  |
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| Results: |  |  |
| C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image005.jpg | enter command:s  -------SERVER------  DROP/1.0 DIR 200 null  size:32  lines:2    myfile1.txt:11  myfile4.txt:29    -------SERVER------  DROP/1.0 PUT 200 ok | -------Client------  DIR DROP/1.0      -------Client------  PUT myfile5.txt DROP/1.0  Bytes:9    some file |
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| Next I created 2 new files on the server and 1 new file on the client |  |  |
|  | C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image006.jpg    Created newfile3.txt | C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image007.jpg  Created newfile1.txt  Created newfile2.txt |
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| Result: |  |  |
| C:\Users\hamid\AppData\Local\Temp\msohtmlclip1\02\clip_image008.jpg    Snapshot file was updated by the client | enter command:s  -------SERVER------  DROP/1.0 DIR 200 null  size:81  lines:5    myfile1.txt:11  myfile4.txt:29  myfile5.txt:9  newfile1.txt:23  newfile2.txt:23    -------SERVER------  DROP/1.0 PUT 200 ok      -------SERVER------  DROP/1.0 GET 200 null  size:23    new file 1 text content  -------SERVER------  DROP/1.0 GET 200 null  size:23    new file 2 text content | -------Client------  DIR DROP/1.0      -------Client------  PUT newfile3.txt DROP/1.0  Bytes:23    new file 3 text content  -------Client------  GET newfile1.txt DROP/1.0      -------Client------  GET newfile2.txt DROP/1.0 |
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