

Assignment 7

Develop a simple, RMI-based server

(CatServer), which will allow a client to read a text-file line by line.

i.e. the server provides the following methods:

- **public boolean**

openFile(String filename) Opens a file, returns true if file is successfully opened, false otherwise.

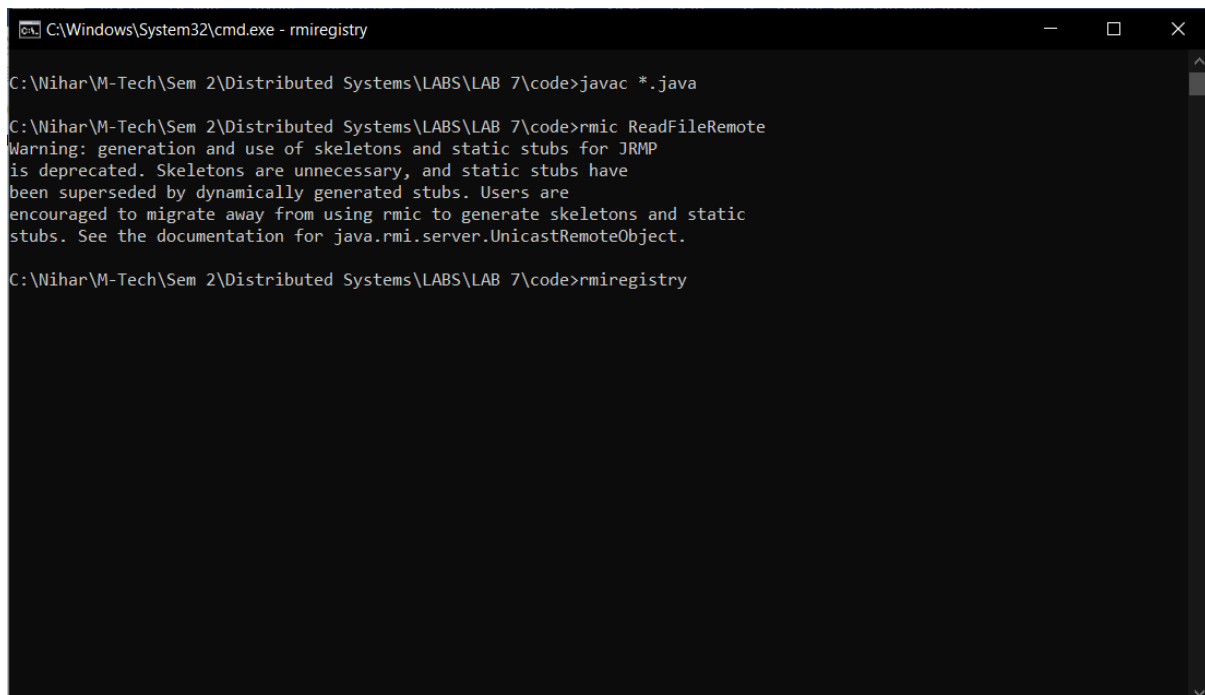
- **public String nextLine()**

Reads and returns the next line from the file. Returns null if end-of-file is reached or if no file has been opened.

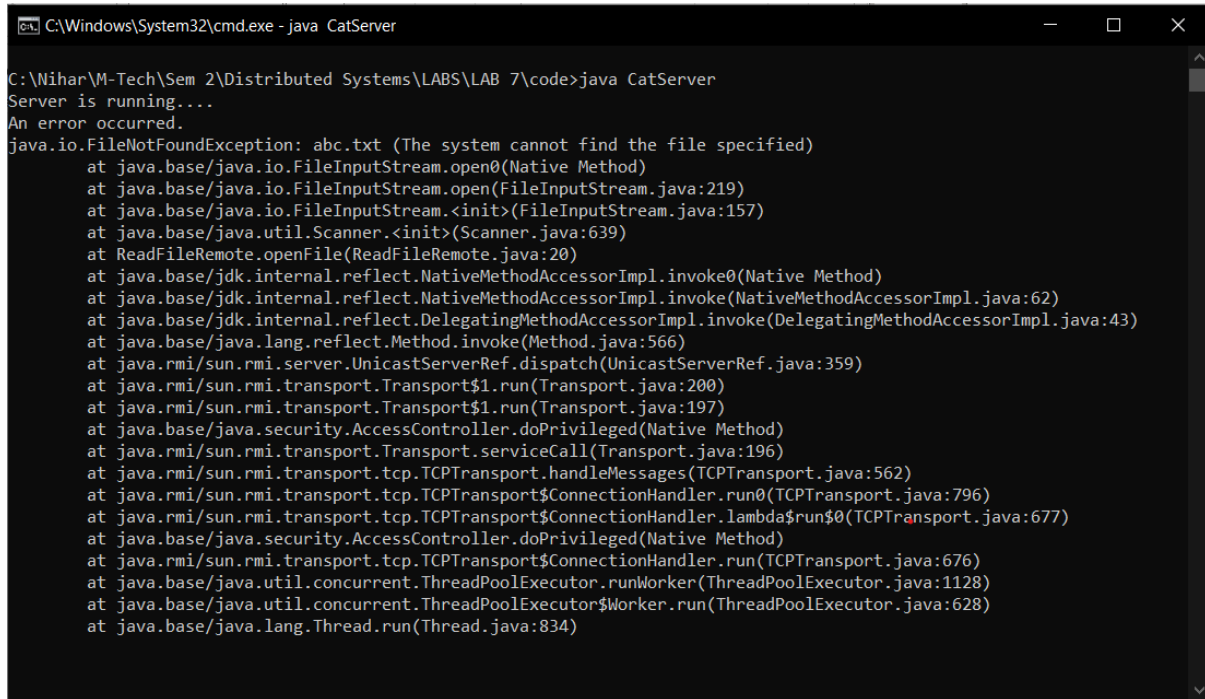
- **public boolean**

closeFile() Close the file which is currently open. Returns true if the file is successfully closed, false otherwise.

Starting rmiregistry:



```
C:\Windows\System32\cmd.exe - rmiregistry
C:\Nihar\M-Tech\Sem 2\Distributed Systems\LABS\LAB 7\code>javac *.java
C:\Nihar\M-Tech\Sem 2\Distributed Systems\LABS\LAB 7\code>rmic ReadFileRemote
Warning: generation and use of skeletons and static stubs for JRMP
is deprecated. Skeletons are unnecessary, and static stubs have
been superseded by dynamically generated stubs. Users are
encouraged to migrate away from using rmic to generate skeletons and static
stubs. See the documentation for java.rmi.server.UnicastRemoteObject.
C:\Nihar\M-Tech\Sem 2\Distributed Systems\LABS\LAB 7\code>rmiregistry
```

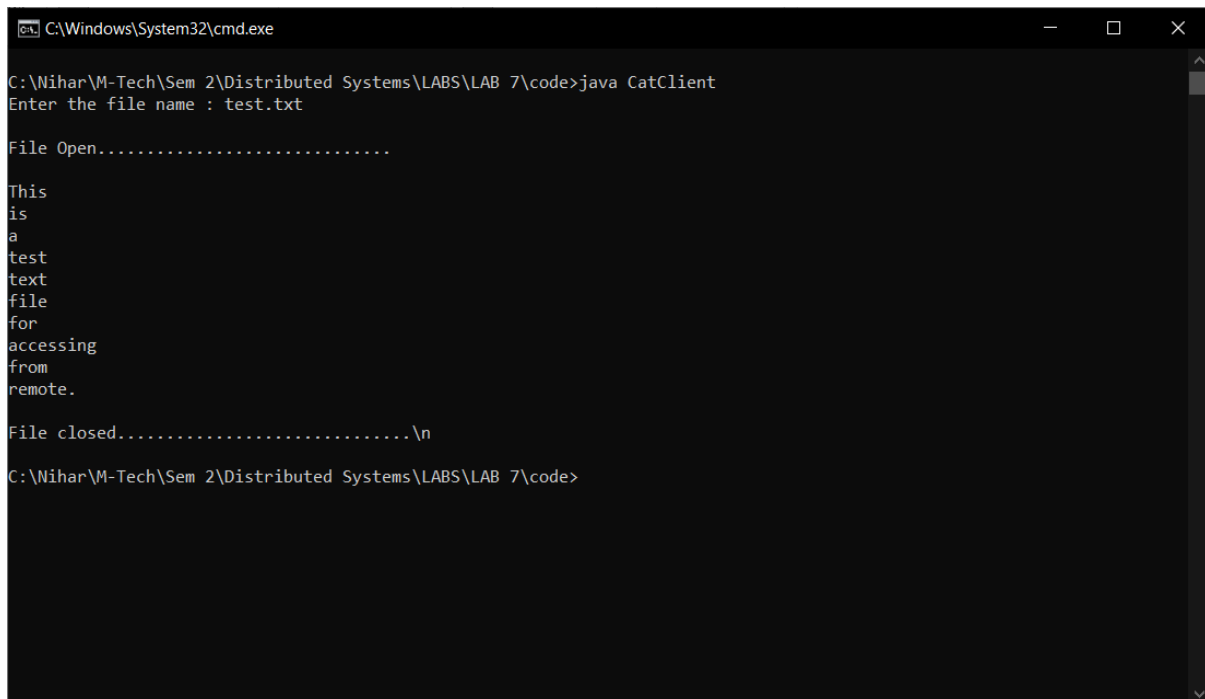
Server:


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C:\Windows\System32\cmd.exe - java CatServer

C:\Nihar\M-Tech\Sem 2\Distributed Systems\LABS\LAB 7\code>java CatServer
Server is running...
An error occurred.
java.io.FileNotFoundException: abc.txt (The system cannot find the file specified)
    at java.base/java.io.FileInputStream.open0(Native Method)
    at java.base/java.io.FileInputStream.open(FileInputStream.java:219)
    at java.base/java.io.FileInputStream.<init>(FileInputStream.java:157)
    at java.base/java.util.Scanner.<init>(Scanner.java:639)
    at ReadFileRemote.openFile(ReadFileRemote.java:20)
    at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at java.base/jdk.internal.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
    at java.base/jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    at java.base/java.lang.reflect.Method.invoke(Method.java:566)
    at java.rmi/sun.rmi.server.UnicastServerRef.dispatch(UnicastServerRef.java:359)
    at java.rmi/sun.rmi.transport.Transport$1.run(Transport.java:200)
    at java.rmi/sun.rmi.transport.Transport$1.run(Transport.java:197)
    at java.base/java.security.AccessController.doPrivileged(Native Method)
    at java.rmi/sun.rmi.transport.Transport.serviceCall(Transport.java:196)
    at java.rmi/sun.rmi.transport.tcp.TCPTransport.handleMessages(TCPTransport.java:562)
    at java.rmi/sun.rmi.transport.tcp.TCPTransport$ConnectionHandler.run0(TCPTransport.java:796)
    at java.rmi/sun.rmi.transport.tcp.TCPTransport$ConnectionHandler.lambda$run$0(TCPTransport.java:677)
    at java.base/java.security.AccessController.doPrivileged(Native Method)
    at java.rmi/sun.rmi.transport.tcp.TCPTransport$ConnectionHandler.run(TCPTransport.java:676)
    at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)
    at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)
    at java.base/java.lang.Thread.run(Thread.java:834)

```

Client:


```

C:\Windows\System32\cmd.exe

C:\Nihar\M-Tech\Sem 2\Distributed Systems\LABS\LAB 7\code>java CatClient
Enter the file name : test.txt

File Open.....

This
is
a
test
text
file
for
accessing
from
remote.

File closed.....\n
C:\Nihar\M-Tech\Sem 2\Distributed Systems\LABS\LAB 7\code>

```