Verification

Test results:

- **Registering files to each peer:**
  - As soon as peer starts, server check for local files in share folder, and index them into that peer itself.
  - And it is tested. This automatically index all files in the share folder.

- **Search and downloading file:**
  - File requested by user is searched with neighboring peers and there neighboring and so on, depending on topology used. And then, the peer who has that file returns it to the requesting peer. And ask user whether he want to retrieve that file or not.
  - Searching file is tested on multiple peers (10 peers) concurrently with files with different sizes on both linear and star topology. And everything works properly.
  - It gives list of peers where the file is located, otherwise gives message – "File Not Found!!"
  - After confirming and selecting peer from which file is used to download, download starts, and within few milliseconds, file get downloaded into download folder of that peer.

- **PUSH Based approach for consistency:**
  - If the master file is changed/modified then, INVADIATION message is sent to all peers, to indicate all other peers that the copy of file they have is old. And, this is working perfectly.
  - This approach is tested by performing searching and downloading on 1,2,3,4 peers and modification on other peers.

- **PULL Based approach for consistency:**
  - If the master file is changed/modified and some peer requests for the same file, at that time, the peer from which file supposed to download check for last modified time. And if modified time is newer then, peer directly call new download request from original peer.
  - This approach is tested by performing searching and downloading on 1,2,3,4 peers and modification on other peers with TTR value 1 min (60) and 2 min (120).

Things going wrong in the code:

- While searching file on the indexing server, you must enter full name of that file, code does not give partial searches or intelligent search which will predict file name.
- Sometimes, After TTR expire, it takes little time to update it again.