Manual

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1. Setup

1.1 Windows 10

Windows 10 was the operating system used to build and test ther peer and index server.

1.2 Python 3.7

The peer and index server were both built and tested using python 3.7 on Windows 10.

1.2.1 Downloading

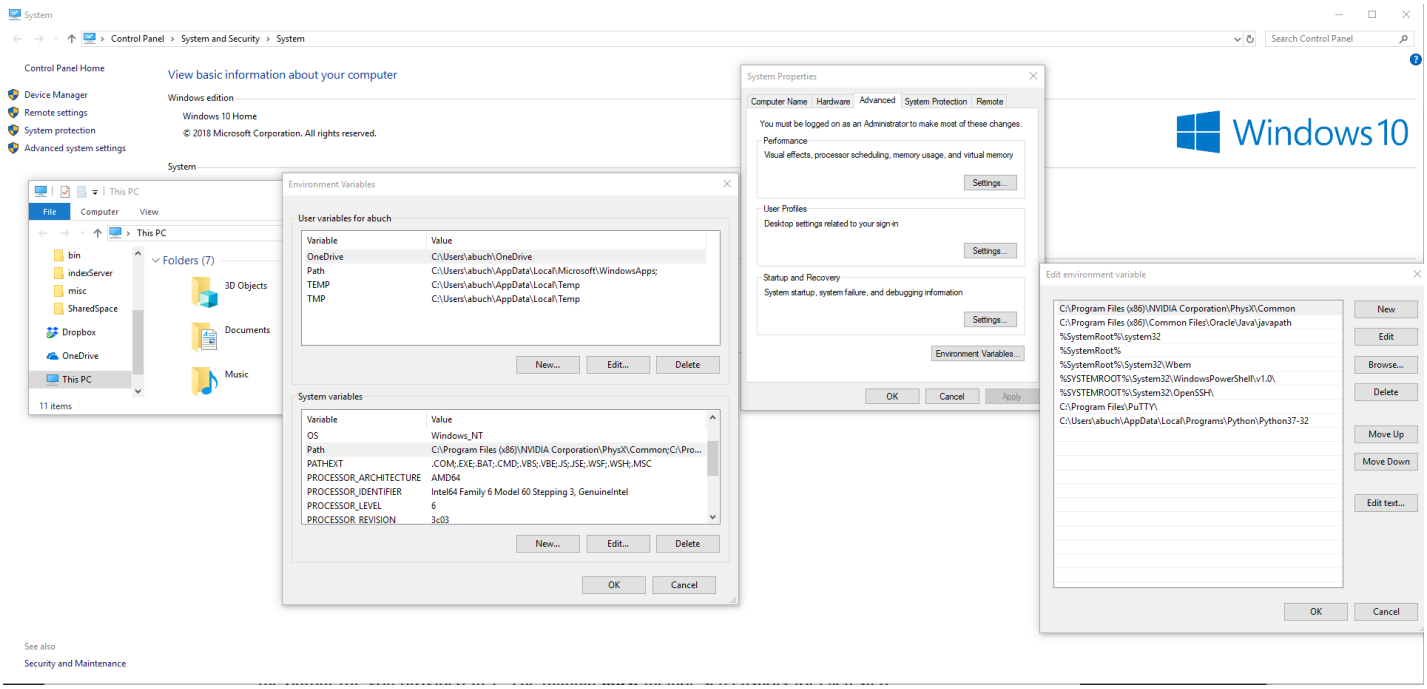
Python 3.7 can be downloaded from their website at: https://www.python.org/downloads/ (https://www.python.org/downloads/)

1.2.2 Configuration and Installation

1. Run the python 3.7 installer and follow the on screen instructions
2. record the directory that the python.exe was saved in
3. Add the python directory to the global PATH variable

Note: How to add to PATH variable

1. open file explore
2. right click *This PC*
3. *properties*
4. *Advanced system settings*
5. *Environment Variables*
6. *System variables*
7. click *path*
8. click edit
9. add python.exe directory to PATH



1.3 Peer

1.3.1 Installation

1. Download peer
2. unzip peer if compressed

1.3.2 Configuration

The configuration file is *globals.py* located in *\peer\bin*. The lines that need to be updated are:
10. INDEX_SERVER_IP = the ip address of the index server
15. LOCAL_SHARED_FILE_SPACE = the path of the shared space directory

```
1   ##############################
2   ##
3   ##  Global variables
4   ##
5   ##############################
6   PEER_SERVER_STATUS = 0  # -1 = failed, 0 = starting, 1 = running
7   PEER_SERVER_PORT = 9696
8
9   INDEX_SERVER_CONNECTION = 0 # -1 = failed, 0 = starting, 1 = running
10  INDEX_SERVER_IP    = "198.37.25.70"
11  INDEX_SERVER_PORT = 6001
12
13  P2P_PORT = 9696
14
15  LOCAL_SHARED_FILE_SPACE = "C:\\Users\\abuch\\Documents\\classes\\CS550\\PA1\\Peer\\SharedSpace"
16  LOCAL_FILE_LIST = []
17
18  #message commands
19  REMOVE_FILE      = 0
20  ADD_FILE         = 1
21  SEARCH_FILES     = 2
22
23  PEER_CLIENT_STATUS = 0
24
```

1.4 Index Server

1.4.1 Installation

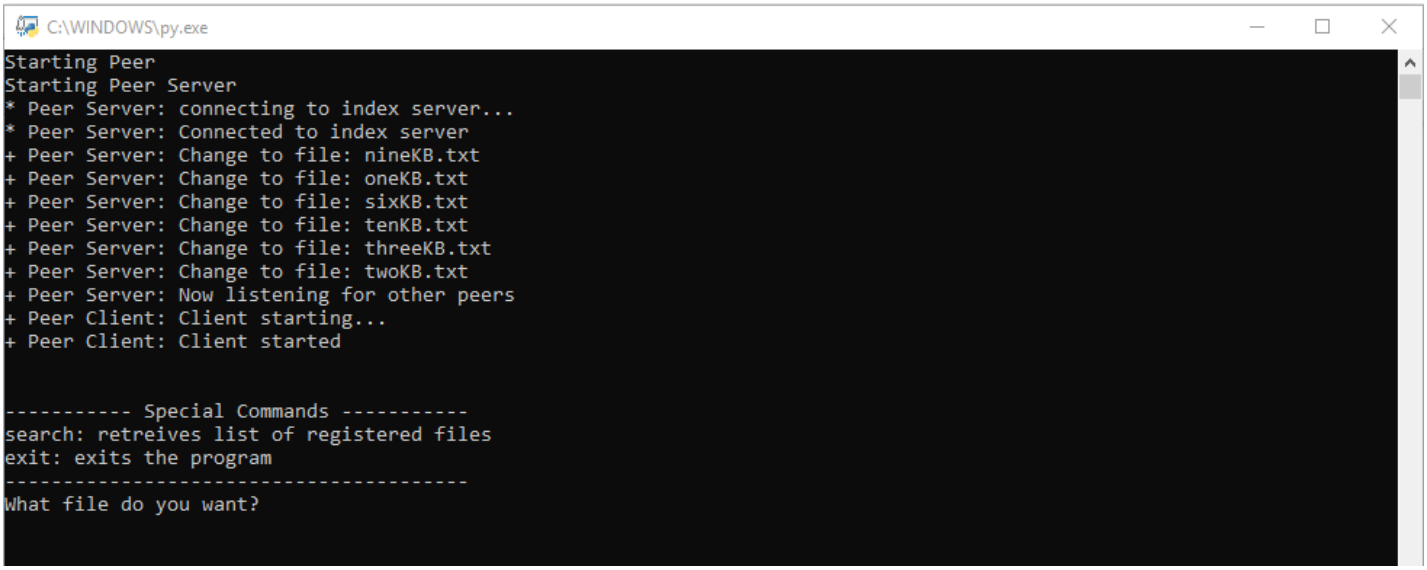
1. Download index server
2. unzip index server if compressed

2. Running

2.1 Peer

1. make sure peer is properly configured
2. `python <bin directory>\main.py`
3. Enter data as prompted

Special Commands:
search: asks the index server for a list of available files
exit: exits the program
test.txt: performs a test by reading the test.txt file



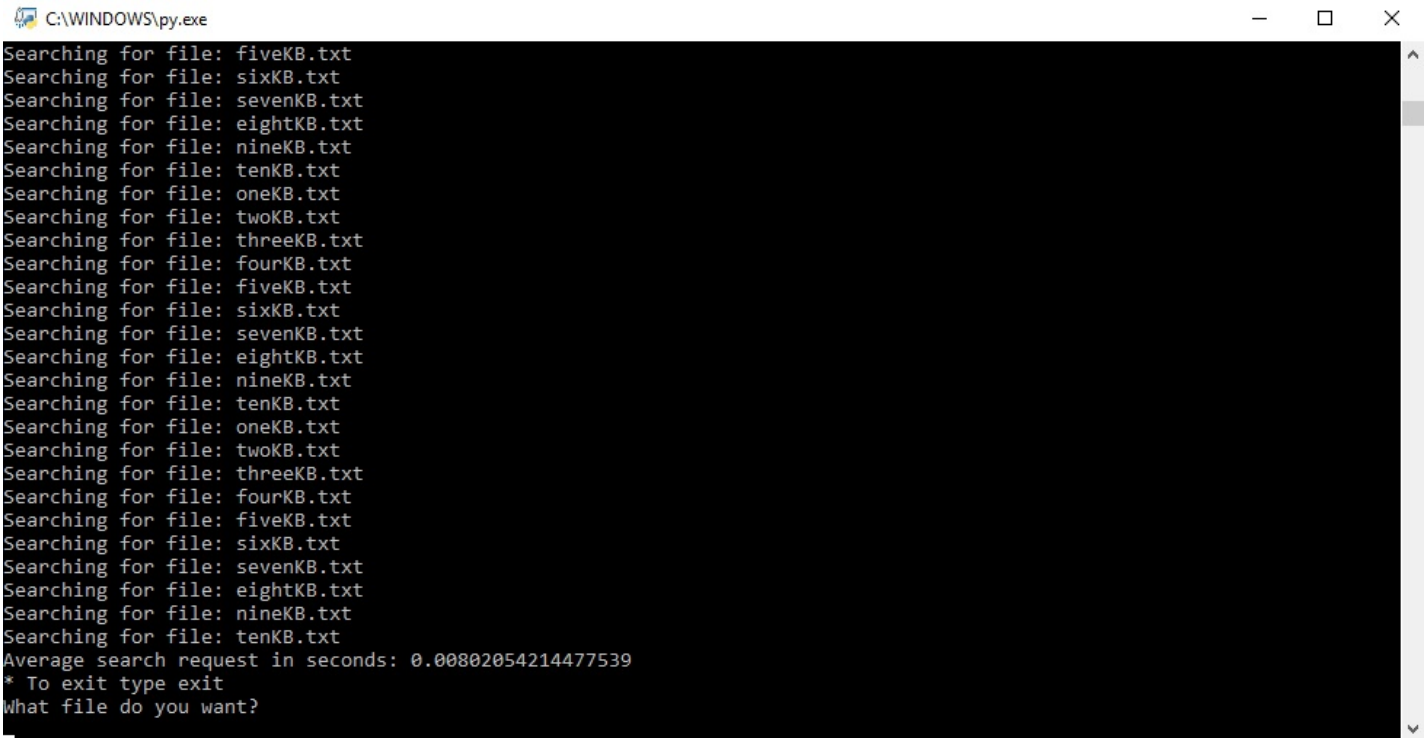
2.2 Index Server

`python <location>\centralIndexingServer.py`
The server will start and wait for connections

3. Test Case

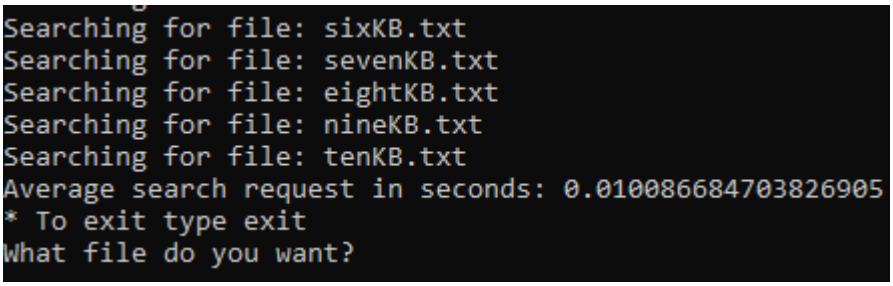
3.1 Test 1

This test consisted of having one peer connected and querying the index server for 500 files. The average response time in seconds is shown bellow.



3.2 Test 2

This test consisted of having three peers connected and querying the index server for 500 files. The average response time in seconds is shown bellow.



3.3 More Tests

Check test.pdf for more information on testing