**CPS 706 Read Me**

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Team 2

Presenting with Haytham Qushtom

Readme.doc containing the description of your source code and instructions how to compile and run the application

Our code, written in Java, consists of classes that simulate all the major factors in the system. Our classes are P2PClient.java (simulating the person using the computer), P2PServer.java (simulates the peer to peer server portion that also contains the HTTP codes to simulate the features of HTTP 1.1, while at the same time is also multi-threaded and uses TCP connections to simulate the download/upload features of a P2P Server network), and finally DirectoryServer.java (simulates the implementation of the Directory Server Pool using the specified DHT or Distributed Hash Table which contains records where content name hashes into value equal to server ID-1, there is also a hash function that sums decimal values of ASCII characters of content name into integer values as requested in assignment)

To compile and run the code, you must first run either the P2Pclient.java file or the DirectoryServer.java file separately, but before doing that make sure you know the IP address of the computer(s) that you will be running the servers on. You will be required to have a minimum of 6 servers, at least 4 running the DirectoryServer.java files which implements the 4 Directory Server Pools and at least 2 P2Pclient servers with one client that runs the upload and the other that will query the uploaded file and download it.

Once you have the IP addresses of all required computers running the servers, make sure you record the IP address and port number of the 1st DirectoryServer.java and one for the successor DirectoryServer.java or 2nd DirectoryServer.java. (In our case the IP address for first Directory Server is ENG205-33 and port is 20110, 2nd would be ENG205-34 and its port 20110). Repeat this until you have 4 Directory Servers running at the same time. After this is done, run 2 P2Pclient.java files on 2 separate machines and you will get a input box popup 3 times. Enter any of the Peer Servers ip addresses (any of the 4 Directory Servers IP’s) for first input, port number for FIRST Directory Server, and then enter IP Address for FIRST Directory Server. If everything was set up properly you should be able to connect to the network and receive command line that looks like the following:

