A SIMPLE GNUTELLA STYLE PEER TO PEER FILE SHARING SYSTEM

Manual

1. Installation Prerequisites

A. Software Prerequisites

1. Java SE Runtime Environment 8
2. Ubuntu nodes
3. Apache ant

2. Steps to Execute

Extract zip file to a location in your Linux environment.

To run it:

1. Go to P2PGnutella folder in another terminal window and execute command:

   ant clean
   ant compile
   ant jar

2. Run below commands in different terminals to start 10 different clients:

   ant run ant -Darg0=1 -Darg1=8001 run
   ant run ant -Darg0=2 -Darg1=8002 run
   ant run ant -Darg0=3 -Darg1=8003 run
   ant run ant -Darg0=4 -Darg1=8004 run
   ant run ant -Darg0=5 -Darg1=8005 run
   ant run ant -Darg0=6 -Darg1=8006 run
   ant run ant -Darg0=7 -Darg1=8007 run
   ant run ant -Darg0=8 -Darg1=8008 run
   ant run ant -Darg0=9 -Darg1=8009 run
   ant run ant -Darg0=10 -Darg1=8010 run

This will start all 10 peers peer from port 8001 to 8010

```
→ P2PGnutella git:(master) ✗ ant clean
ant compile
ant jar

Buildfile: /Users/Kunal/Documents/workspace/P2PGnutella/build.xml

clean:
   [delete] Deleting directory /Users/Kunal/Documents/workspace/P2PGnutella/build

BUILD SUCCESSFUL
Total time: 0 seconds
Buildfile: /Users/Kunal/Documents/workspace/P2PGnutella/build.xml

compile:
    [mkdir] Created dir: /Users/Kunal/Documents/workspace/P2PGnutella/build/classes
    [javac] Compiling 8 source files to /Users/Kunal/Documents/workspace/P2PGnutella/build/classes

BUILD SUCCESSFUL
Total time: 1 second
Buildfile: /Users/Kunal/Documents/workspace/P2PGnutella/build.xml

jar:
    [mkdir] Created dir: /Users/Kunal/Documents/workspace/P2PGnutella/build/jar
      [jar] Building jar: /Users/Kunal/Documents/workspace/P2PGnutella/build/jar/P2PGnutella.jar

BUILD SUCCESSFUL
Total time: 0 seconds
→ P2PGnutella git:(master) ✗ ant -Darg0=1 -Darg1=8001 run
Buildfile: /Users/Kunal/Documents/workspace/P2PGnutella/build.xml

run:
     [java] Peer 1 acting as server on 127.0.0.1:8001
     [java]
     [java]
     [java] ********************************************************************
     [java] **** A Simple Gnutella Style Peer to Peer File Sharing System ****
     [java] ********************************************************************
     [java] 1. Search and Download File
     [java] 2. Exit
     [java] Select your choice:
```

To run test cases:

1. Go to P2PGnutella folder in terminal and execute command:

    ant -buildfile testBuild.xml clean
    ant -buildfile testBuild.xml compile
    ant -buildfile testBuild.xml jar
    ant -buildfile testBuild.xml run

2. This will run all the tests.

Note:

- This code is written for two different topologies, viz., linear and star topology
- To change it just uncomment respective topology configuration from config.properties and comment other one.

```
# Peer details
1.ip=127.0.0.1
1.port=8001
2.ip=127.0.0.1
2.port=8002
3.ip=127.0.0.1
3.port=8003
4.ip=127.0.0.1
4.port=8004
5.ip=127.0.0.1
5.port=8005
6.ip=127.0.0.1
6.port=8006
7.ip=127.0.0.1
7.port=8007
8.ip=127.0.0.1
8.port=8008
9.ip=127.0.0.1
9.port=8009
10.ip=127.0.0.1
10.port=8010

# Linear
1.neighbors=2
2.neighbors=1,3
3.neighbors=2,4
4.neighbors=3,5
5.neighbors=4,6
6.neighbors=5,7
7.neighbors=6,8
8.neighbors=7,9
9.neighbors=8,10
10.neighbors=9


# star network
1.neighbors=2,3,4,5,6,7,8,9,10
2.neighbors=1
3.neighbors=1
4.neighbors=1
5.neighbors=1
6.neighbors=1
7.neighbors=1
8.neighbors=1
9.neighbors=1
10.neighbors=1
```