Name: Abhishek Prajapati (net id: abp119, Student id: 161003677)
Shridhar Oza
Phase 1 Write up
Date: 10/17/2016

Bittorrent Client Phase 1 write up

This program takes in a torrent file and downloads the file. It uses TorrentInfo class to parse and decodes the data given by the torrent file. After that tracker response class gets the http url from specific ip and port number and gather the peer's information which then communicates with the peer and downloads the file.

Class Info

- RUBTClient.java : This is a main class that takes two arguments, the torrent file and the name that the client wants to save the file as. This class parses and decodes the file using torrentInfo class. The torrentInfo object holds the metadata of the torrent which is used by other classes to read and send messages to tracker so we know which pieces are already downloaded and which pieces are still left to be download.
- Peer.java : This class connects to peers and maintain connection between each peer. It sends and receives messages to and from peers to communicate with different peers. It also verifies the handshake response. If the message indicates that the if the piece that the peer has is downloaded or not, if not it gets the piece from the peer.

- Tracker.java : This class performs the creates URL and gets HTTP request so we can get the list of peers that the user can connect to. It also gets the peer id , and does URL encoding. It gets the correct peer from the tracker with RU prefixing.
- Message.java : This class has different byte messages which are used to communicate with peers. It prints out proper message based on the given information from tracker.

Feedback:

- The assignment was doable, however , we need more peers because it took 20 minutes to download the given torrent. If more peers were available then it would download faster. But the it took forever to check if your code actually downloads the file or not because it literally took 20 minutes each time.