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CSSE 477
CM 1405
Assignment 5

Problem 1

IConnectionMonitor: It's an interface that runs and stops the p2p connection.

IHandler: It's an interface that provides entry for IRequestHandler, IResponseHandler and AbstractHandler.

IHost: It's an interface that provides the information of the address and port of the host.

IP2PMediator: It's an interface that handles all the communication between clients and process most of the activities.

IPacket: It's an interface that gets the useful information from the packet such as protocol, command and object. Then it serializes and deserialize the stream.

IProtocol: It's an interface that controls the request and response handlers.

IRequestHandler: It's an interface that handles the request package.

IResponseHandler: It's an interface that handles the response package.

IStreamMonitor: It's an interface that allows to run and stop the p2p stream with multi thread enviroment.

AbstractHandler: It's an abstract class that creates and returns the IP2Mediator.

Problem 2

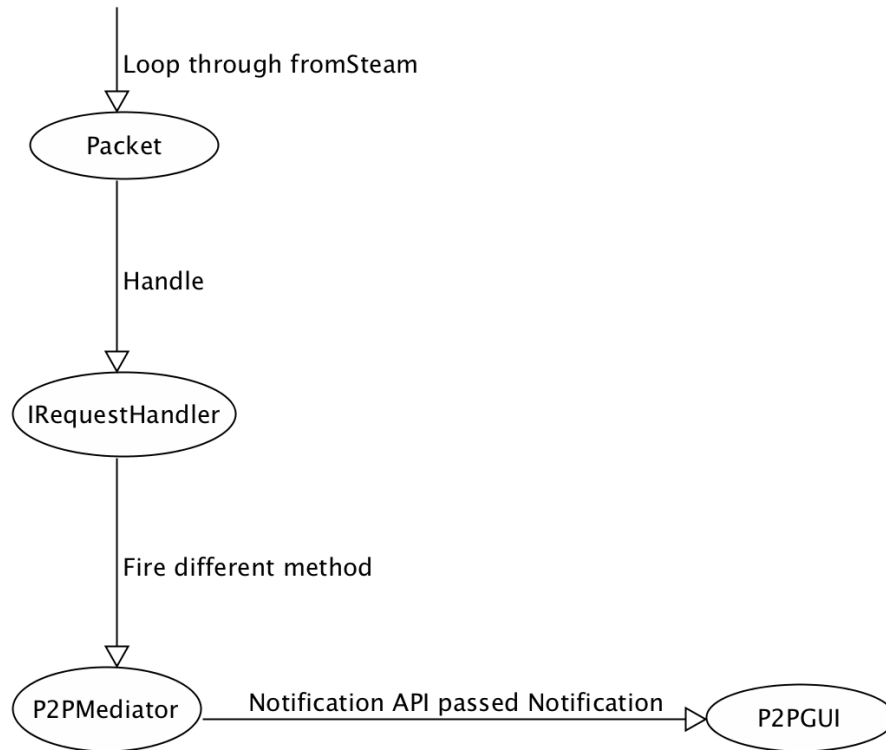IActivityListener: It's an API that performs the activity.

IConnectionListener: It's an interface that listens to the connection, add and remove elements to the peerListModel.

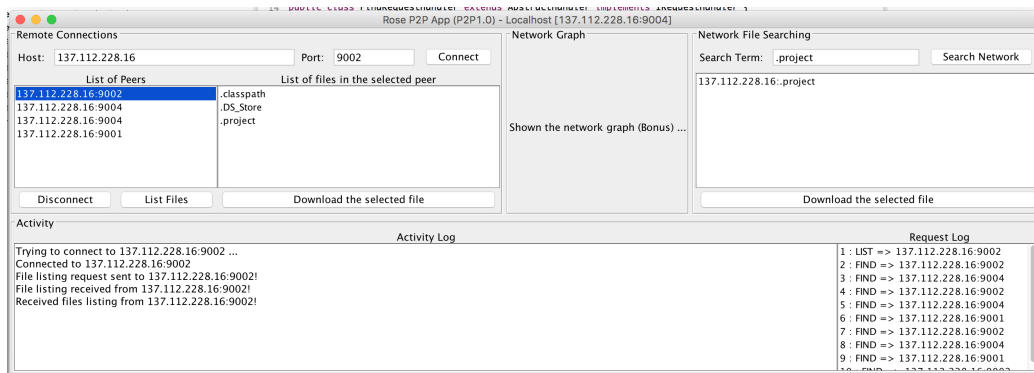IDownloadListener: It's an interface that provides the status of the download situation.

IListingListener: It's an interface that posts the status of the listing, clear the filelistmodel, then add the element to the filelistmodel.

IRequestLogListener: It's an interface that clears the requestLogListModel then add command and object Element to the requestLogListModel.

Problem 3

Loop through fromSteam

Packet

Handle

IRequestHandler

Fire different method

P2PMediator   Notification API passed Notification   P2PGUI

The Packet loops through the fromStream method to parseStatus and parse-Headers, then set up protocol and handler. Then IRequestHandler handles the request. Pass to P2PMediator, it will fire different method. Then P2PGUI will get notification from the Notification API.

The FIND file request has format:

P2P1.0 FIND $< REceiver - IP : Port >< CRLF >$

$Host :< Sender - IP >< CRLF >$

$Port :< Sender - Port >< CRLF >$

$SEQ_NUM :< Sender - Generated - Seq - No >< CRLF >$

$ORIGINAL_HOST :< Original - Host >< CRLF >$

$ORIGINAL_PORT :< Original - Port >< CRLF >$

$DEPTH :< Search - Depth >< CRLF >$

$SEARCH_TERM :< Search - Term >< CRLF >$

$< CRLF >$

The FOUND file request has format:

P2P1.0 FOUND $< REceiver - IP : Port >< CRLF >$

Host:$< Sender - IP >< CRLF >$

Port:$< Sender - Port >< CRLF >$

$SEQ\_NUM :< Sender - Generated - Seq - No >< CRLF >$

$Payload - Size :< Size - Of - Payload >< CRLF >$

$< CRLF >$

a.txt$< CRLF >$

a.gif$< CRLF >$