Iteration 4 UML Class Diagram

<<Enumeration>>
OPCodes

READ
WRITE
DATA
ACK
ERROR

<<Enumeration>>
Endhost

CLIENT
SERVER

<<Enumeration>>
Direction

IN
OUT

CommonMethods

+ errorMap: Map<String, Integer>
- tempFileName: String

+ getPort(DatagramPacket): int
+ resizePacket(DatagramPacket): DatagramPacket
+ outputText(DatagramPacket, Direction, Endhost, Boolean)
+ blockNumToBytes(int): byte[]
+ isRequest(DatagramPacket): Boolean
+ getFilename(DatagramPacket): String
+ isOOB(DatagramPacket): Boolean
+ deepCopy(DatagramPacket): DatagramPacket
+ areTheSame(DatagramPacket, DatagramPacket): Boolean

Client

- ERRORSIM_PORT: int
- DATA_SIZE: int
+ clientIP: InetAddress
+ errorSimIP: InetAddress
+ serverIP: InetAddress
+ pathName: String
+ fileName: String
+ operation: String
+ quit: String
+ receivedFile: Vector<byte[]>
+ fileSize: int
- txPacket: DatagramPacket
- rxPacket: DatagramPacket
- socket: DatagramSocket
- verboseOutput: Boolean
- expectedTID: InetSocketAddress

+ Client()
- makeRequest(String, String, OPCodes, InetAddress): DatagramPacket
+ userInput(Client)
+ saveFile(Vector<byte[]>, String, Client)
+ newDatagram(InetAddress, OPCodes, String): DatagramPacket
+ sendOOB(Boolean)
+ validatePacket(DatagramPacket): Boolean
+ checkError(DatagramPacket): String
+ sendError(DatagramPacket)
+ readRequest(DatagramPacket): Vector<byte[]>
+ writeRequest(DatagramPacket, String)

ErrorSim

- CLIENT_PORT: int
- SERVER_PORT: int
- DATA_SIZE: int
- txPacket: DatagramPacket
- rxPacket: DatagramPacket
- mode: int
- testOpcode: byte
- testBlockNum: int
- delay: long
- isLost: Boolean
- testPacktet: DatagramPacket
- testSocket: DatagramSocket
- illegalField: int
- delayOpcode: byte
- delayBkNum: int

- getUserInput()
+ simulateServerError(int, DatagramSocket, Boolean): Boolean
+ resetTestVars()

Server

- ERRORSIM_PORT: int
- DATA_SIZE: int
- packet: DatagramPacket
- socket: DatagramSocket
- isListener: Boolean
- quitSignal: Boolean
- verboseOutput: Boolean
- expectedTID: InetSocketAddress
- pathname: String
- fileSize: int

+ Server(int)
+ Server(DatagramPacket, Boolean)
+ validatePacket(DatagramPacket): Boolean
+ saveFile(Vector<byte[]>, String)
+ run()
+ checkError(DatagramPacket): String
+ sendReply(DatagramPacket, DatagramSocket)
+ sendError(DatagramPacket)
+ writeRequest(int, String)
+ readRequest(int, String)

ResendPacket

- txPacket: DatagramPacket
- socket: DatagramSocket
- msg: String
- dir: Direction
- host: Endhost
- verboseOutput: Boolean

+ ResendPacket(DatagramPacket, DatagramSocket, String, Direction, Endhost, Boolean)
+ run()