Client

ZERO: byte ONE: byte TWO: byte FOUR: byte blockNum : int[] fileAsBytes : byte[]

sendReceiveSocket: DatagramSocket sendPacket: DatagramPacket

receivePacket: DatagramPacket

Client()

sendWrite(String): void sendRead(String):void + createDataPacket():byte[] createACKPacket(int[]): byte[] + checkACK(byte[]) :boolean

sendPack(DatagramSocket, DatagramPacket) : void

+ receivePack(DatagramSocket, DatagramPacket) : DatagramPacket

 createRRQPacket(String) : DatagramPacket createWRQPacket(String) : DatagramPacket finishRRQOrWRQ(byte[], String, String): void + createSendPacket(byte[]) : DatagramPacket createReceivePacket(byte[]) : DatagramPacket

calcBlockNumber():int[] printSend(DatagramPacket): void printReceive(DatagramPacket): void

printStatus(DatagramPacket): void

toBytes():byte[] shutdown(): void

+ main(String) : void <<static>>

ErrorSimulator

 receiveSocket : DatagramSocket sendReceiveSocket : DatagramSocket receivePacket : DatagramPacket sendReceivePacket : DatagramPacket sendPacket: DatagramPacket

+ ErrorSimulator()

+ receiveAndSend(): void

+ sendPack(DatagramSocket, DatagramPacket) : void

+ receivePack(DatagramSocket, DatagramPacket) : void

 printSend(DatagramPacket) : void - printReceive(DatagramPacket) : void - printStatus(DatagramPacket) : void

+ main(String) : void <<static>>

ServerThread

sendSocket : DatagramSocket receivePacket : DatagramPacket sendPacket: DatagramPacket

- dir : String writer : Writer - blockNumber : int[] - message : String read : String - write : String · path : byte[]

ServerThread(DatagramPacket, byte[], String, int[])

+ run(): void

handleWriteRequest(byte[]): void

· handleData(byte[]) : void

sendPack(DatagramSocket, DatagramPacket) : void

+ createDataPacket():byte[]

+ createACKPacket(): byte[]

printSend(DatagramPacket) : void

printlnfo(DatagramPacket) : void

Server

receiveSocket : DatagramSocket receivePacket : DatagramPacket

ONE : byte path : byte[] port:int rq : String read : String write : String blockNumber : int[]

+ Server()

+ run(): void

checkReadWrite(byte[]): String

shutdown(): void << synchronized>>

getPath(DatagramPacket) : String toBytes(String): byte[]

calcBlockNumber():int[]

receivePack(DatagramSocket, DatagramPacket) : void

printReceive(DatagramPacket) : void printlnfo(DatagramPacket): void

+ main(String) : void <<static>>

output: FileOutputStream

+ Writer(String, boolean)

+ writeToFile(byte[]) : void

+ close():void

Writer