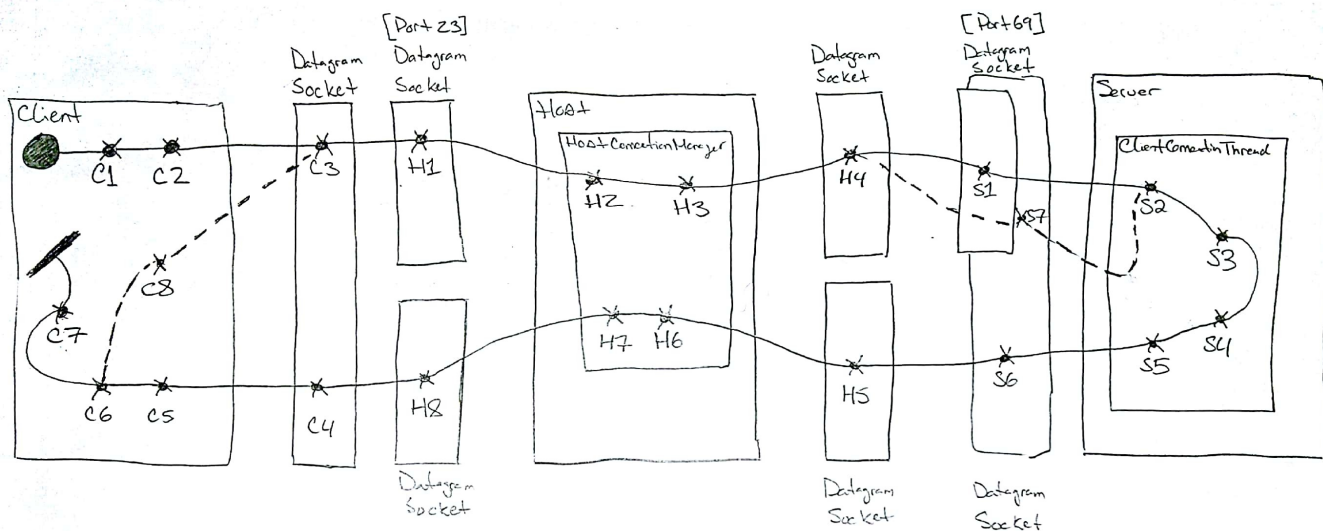


## UCM Diagram For Read Request

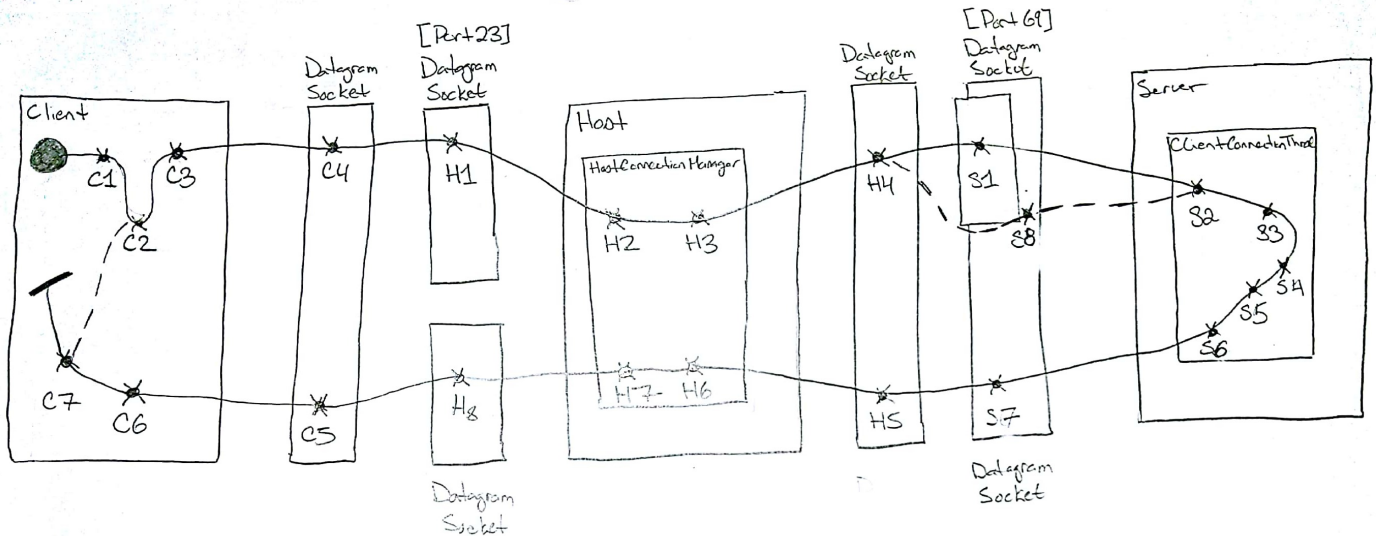


C1 create Read Request  
 C2 create Datagram Packet  
 C3 send Datagram Packet  
 C4 receive Datagram Packet  
 C5 extract data  
 C6 verify data  
 C7 Write data  
 C8 create Acknowledgement

H1 receive Datagram Packet  
 H2 extract Packet  
 H3 create Datagram Packet  
 H4 send Datagram Packet  
 H5 receive Datagram Packet  
 H6 extract Packet  
 H7 create Datagram Packet  
 H8 send Datagram Packet

S1 receive Datagram Packet  
 S2 extract Datagram Packet  
 S3 validate Datagram Packet  
 S4 read data  
 S5 create Datagram Packet  
 S6 send Datagram Packet  
 S7 receive Datagram Packet (Acknowledgement)

## UCM Diagram For Write Request



C1 create WriteRequest  
 C2 read data  
 C3 create DatagramPacket  
 C4 send DatagramPacket  
 C5 receive DatagramPacket  
 C6 extract Acknowledgment  
 C7 validate Acknowledgment

H1 receive DatagramPacket  
 H2 extract Packet  
 H3 create DatagramPacket  
 H4 send DatagramPacket  
 H5 receive DatagramPacket  
 H6 extract Packet  
 H7 create DatagramPacket  
 H8 send DatagramPacket

S1 receive DatagramPacket  
 S2 extract data  
 S3 verify data  
 S4 write data  
 S5 create Acknowledgment  
 S6 create DatagramPacket  
 S7 send DatagramPacket  
 S8 receive DatagramPacket

Client
-sendPacket: DatagramPacket -receivePacket: DatagramPacket -sockRs: DatagramSocket -rcvData: byte
+Client() +send(int, String, String): void +buildAck(int, InetAddress, int): DatagramPacket +handleRead(String): void +handleWrite(String): void +main(String[]): void

Host
+sendPacket: DatagramPacket +receivePacket: DatagramPacket +sockR: DatagramSocket +sockS: DatagramSocket +rcvData: byte[] +client: boolean +clientport: int
+Host() +receive(): void +main(String[]): void

Server
+receiveSocket: DatagramSocket +receivePacket: DatagramPacket +serverConsoleThread: Thread +allResponseThreads: ThreadGroup +int: num
+Server() +main(String[]): void

ClientConnectionThread<<thread>>
+ACKPacket: DatagramPacket +dataPacket: DatagramPacket +threadId: int +fileController: AsynchronousFileChannel +dataBuffer: ByteBuffer +errorBuffer: ByteBuffer
+ClientConnectionThread(DatagramPacket, int) +run(): void -parse(): int -respondRead(String, String): int -respondWrite(String, String): int -respondError(String, int): int

HostConnectionManager<<thread>>
+socket DatagramSocket +datagramIn: DatagramPacket +datagramOut: DatagramPacket +originalRequest: DatagramPacket +clientAddress: SocketAddress +serverAddress: SocketAddress +data: byte[] +originalData: byte[] +originalLength: int
+HostConnectionManager(DatagramPacket) +run(): void

ServerConsoleThread<<thread>>
+shutdownCode: String +consoleResponse: BufferedReader
+run(): void



poll