

Message Transmission project with HDLC protocol

According to our program, we have 2 classes, which are transmissionTester.java and dataPacket.java.

1. dataPacket is the class that set and get the information of the data packet
2. transmissionTester is the class that makes sender transmits packet data to receiver. The functions consists of sender(), createPacket(char s, char d, String type, String m), send(dataPacket packet), receiver(dataPacket packet). Sender() is the function that inputs the packet data including source address, destination address, type of message and message in string format which each input string size isn't exceeded 100 bits. createPacket(char s, char d, String type, String m) is the function that convert all the information in the data packet that user input to binary format. The parameters of this function is source address, destination address, type of information and message. Send(dataPacket packet) is the function that sends the data packet to receiver. Receiver(dataPacket packet) is the function that demonstrates all information of the sent data packet in string format and responses to the monitor that receiver can accept the data packet of the sender.

```
-----Sender-----
Source Address: A
Destination Address: B
Type: high
Message: Thank you

*****HDLC Format*****
Source Address: 1000001
Destination Address: 1000010
Type: 01101000011010010110011101101000
Message: 010101000110100001100001011011100110101100100000011110010110111101110101
*****

-----Receiver-----
Message from sender: Thank you
Source address: A
Destination address: B
Type : high

You're Welcome
```

To use our program, user has to input message, source address, destination address and type of the message as following in string format. Then, the program will encode all information to binary. After the data packet send to receiver all information will decode to string format and display on the monitor.