

Project 2 Report
by
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Description:

The project implements a reliable data transfer protocol, TCP Tahoe and RENO to send the packets across the network. This project is implemented in Java Programming Language. The Client and Server share the same Packet in order to communicate between the network.

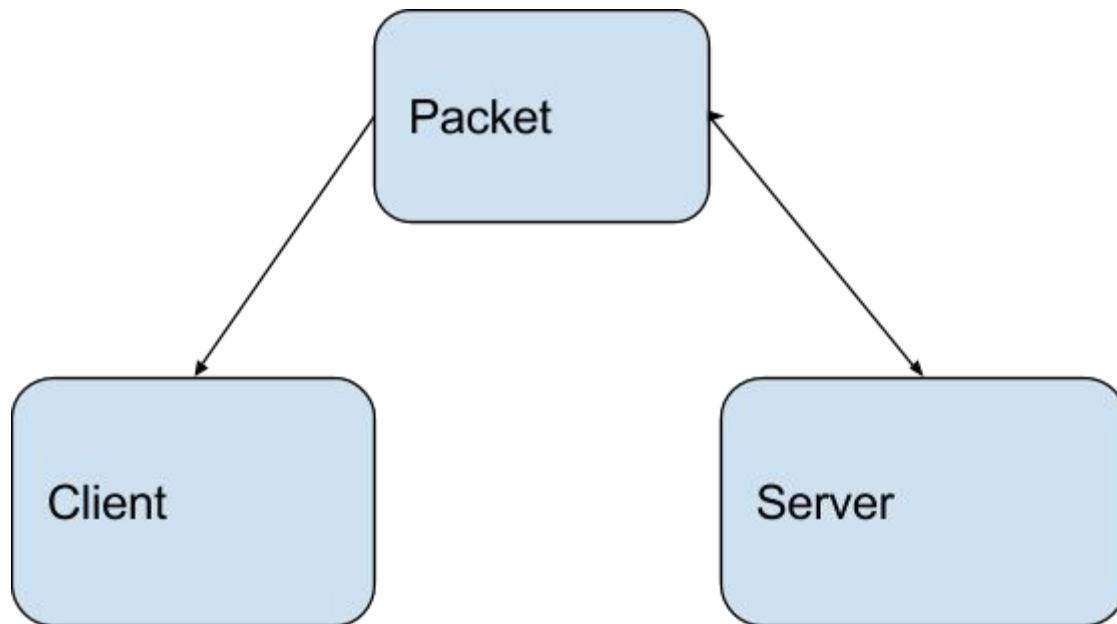
A Packet has a sequence number, size of the packet, data and the checksum.

When the server receive the packet it will checks for the corruption of the packet adds the data to the received container.

Finally if there is not error it will create the file.

Server and Client will implement the MD5 Checksum Algorithm, SHA-1 Checksum Algorithm and CRC32 Checksum Algorithm.

Architecture:



Implemented **Tahoe and Reno:**

Algorithm Implementation:

Tahoe:

The CWindow increases exponentially upto the threshold then after it increased by 1, if there is any timeout then it will,

Use:

Slow Start:

SSThreshold = cwindow/2

cwindow = 1

RENO:

Fast Recovery:

SSThreshold = cwindow/2

cwindow = SSThreshold.

Fast ReTransmit:

3 Duplicate Acknowledgements

Sample Runs:

Used Audio files to test the data.

Checksum:

Calculated check for each and every packet - to know if it is corrupted or not.

Files:

Client.java

fentcp.java

Server.java

Packet.java

Note:

By default the Client uses Tahoe Algorithm