README:

PROJECT 3(DOS)

Tapestry Algorithm

Group Members:

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Run the project:

Unzip the folder name Gupta-Mehta.zip and open the folder, open command prompt and run the command: mix run lib/proj3.exs 1000 5 where 1000 is num_nodes and 5 is num_request.

Working:

1. The input: The algorithm takes the number of nodes(num_nodes) to be created in the network as input as argument 1 and the number of request(num_request) each node will make as argument 2 input.

2. The tapestry network will be constructed initially with (num_nodes-1) nodes. Now the unique hash values for each node is generated.

3. Each node will be initialized and routing table for each node be generated.

4. Each of the nodes (specified by num_nodes parameter) are getting added to the network and begin requesting.

5. After successful join the request is getting routed to a node that is numerically closest as expected to the given value.

6. Final output is calculated by maintaining a count of the number of hops needed to reach the destination. The max hop count is returned from the count list.

The largest tapestry network we tested is: 1500 nodes