Background:

In this assignment we are going to implement three basic concepts of networks in this assignment.

DNS(Domain Name Server), whenever we enter a destination name (website name) it is hosted against some IP and it is resolved by DNS.

Simple Routing, after getting IP address from DNS server about destination we need to send data from source to destination. All of you have an idea about routing protocols such as EIGRP, RIP or OSPF. A routing protocol specifies how routers communicate with each other, distributing routing information that enables them to select routes between any two nodes on a computer network. These routing protocols share their routing table with each other so that whenever a node has to communicate with another node, the router should know where to forward this packet. Now in this task you are implementing a kind of prototype of routing protocol that will work on the basis of hop count. Above diagram is the sample topology for this assignment.

Outcomes:

The purpose of such an assignment is that you would have some idea about basic network operations such as routing protocol and DNS implementation, how they work. How routing tables are shared and how a routing path is calculated in a simple scenario.

DNS Server:

- DNS server will have a file that has few websites such as www.google.com and its IP address 8.8.8.8. There is a functionality in client that it will enter a website name then its IP address will be fetched from DNS server and displayed in the client. It should display the route, information is coming from.

- If a client recently asks for a website like google.com and another client also asks about that then the proxy server will reply to that query and provide their respective IP address. When a response message will be displayed on the client it has details about the replying server and this time it would be a proxy server.