Assignment - VIII

Title:- DNS lookup

Problem statement :-

Write a program for DNS lookup, Given an IP address input, it should return URL & viceversa.

Objective :-

- To learn the concept of DNS lookup.
- To study the inet address for getting respective ip address or URL.

Outcome :-

Implement DNS lookup for an IP address & return & respective URL & viceversa

S/W & H/W :-

64 bit OS, JDK 1-8 / Python 3-8

Theory :-

DNS (Domain Name Service)
The domain name service resolve the names of internet sites with thier underlying IP addressing adding efficiency & even security in the process.

- DNS is a hierarchical & decentralized naming system for computers, services or other resources connected to the internet or a private network.

- It associates various information within domain names assigned to each of the participating entities

- The domain name system delegates the responsibility of assigning domain names

- DNS message format :-

The DNS protocol uses two types of DNS messages queries both have the same format. Each message consist of a header & four sections

① question
② answer
③ authority
④ an additional space

Domain name :-

Domain name an Identificator string that define a read of adminstrative autonomy, authority or control within the internet.

Domain names & are formed by the rules &
procedures of domain name system (DNS)

Domains such as com, info, net, edu, org,
mil, etc.
ex. www.example.com.

Inet Address :-

· Inet address class represents
an IP address. An IP address: An IP
address is represented by 32 bit or
128 bit unsigned number. An instance of
Inet Addresses represents the IP address
with its corresponding host name.

Method :-

1] public static InetAddress getByName(
string host)
It returns hostName.

2] public string getHost Address ()
It returns the IP address in string
format.

3] public string getHostName()
It returns the host name of IP
address.

DNS lookup

A DNS lookup is the process of sending a query for specific domain or IP & getting the record that corresponds to the

conclusion :-

We have successfully implemented the DNS lookup & also learnt the concept of domain name system.