Title: Lab Assignment on Unit VI: (Use PYTHON)

Write a program for DNS lookup. Given an IP address input, it should return URL and vice-versa

PROGRAM

```python
import socket

print ('\nWelcome to DNS to IP Address')
URL=input('Enter URL : ')

addr1 = socket.gethostbyname(URL) #addr2 =
socket.gethostbyname('yahoo.com')
#addr3 = socket.gethostbyname('amazon.com')
#addr4 = socket.gethostbyname('gmail.com')
#addr5 = socket.gethostbyname('facebook.com')

print("IP address = " + addr1) print
('\n\nWelCome IP address to DNS' )
IP=input('Enter IP Address : ')
addr6=socket.gethostbyaddr(IP)
print("URL address = " , addr6)
```

#--------OUTPUT----------

```
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926
32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more
information.
>>>
==== RESTART:
C:\Users\dell\AppData\Local\Programs\Python\Python38-32\DNS.py ===

Welcome to DNS to IP Address
Enter URL : www.google.com
IP address = 142.250.67.164


WelCome IP address to DNS
Enter IP Address : 142.250.67.164
URL address = ('bom12s07-in-f4.1e100.net', [], ['142.250.67.164'])
>>>
==== RESTART:
C:\Users\dell\AppData\Local\Programs\Python\Python38-32\DNS.py ===
```

```
Welcome to DNS to IP Address
Enter URL : Localhost
IP address = 127.0.0.1
WelCome IP address to DNS
Enter IP Address : 127.0.0.1
URL address = ('DESKTOP-N4TPPR1', [], ['127.0.0.1'])
>>>
==== RESTART:
C:\Users\dell\AppData\Local\Programs\Python\Python38-32\DNS.py ===

Welcome to DNS to IP Address
Enter URL : facebook.com
IP address = 157.240.16.35


WelCome IP address to DNS
Enter IP Address : 157.240.16.35
URL address = ('edge-star-mini-shv-01-bom1.facebook.com', [],
['157.240.16.35'])
>>>
```

DNS python / Java.

Q1 What is DNS?

Ans The (Domain Name System (DNS) is the phone directory of the internet human can access information online through domain name like www.google.com facebook.com etc web browser interact through internet prteprotcol (IP) addres DNS translates domain name to IP addres So that browser can lead internet resource.

Q2 What is a resolver?

(a) A DNS resolver is a local server that store a central database of DNS nameservers f manage DNS request for all the client on your network with DNS resolver your computer does not need to store addresses for multiple online name servers a process which is difficult to manage effectrely.

Q3 Why is resolver work iterative?

① Iteration is the process of a DNS client making repeated DNS queries to different DNS servers for name resolution.

② If DNS server doesn't know the ~~answer~~ answer to the DNS reference to another lower level DNS server also.

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Q4 list few domains from top hierarchy.

① . com - commercial organization
② . edu - Educational organizations
③ . gov - Government agencies
④ . mil - Militiary organisation
⑤ . sbi - for State bank of India
⑥ . net - networking entities

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