

# EXPERIMENT - 9

For running LocalDNSServer.c:

```
gcc LocalDNSServer.c -o server -lpthread  
./server 1234
```

Nslookup format from client :

```
nslookup -type=query_type domain_name -port=1234 127.0.0.1
```

Compiling and running server shown below:

```
kali@kali: ~/Desktop/assg 9  kali@kali: ~/Desktop/assg 9  
kali@kali:~/Desktop/assg 9$ gcc LocalDNSServer.c -o server -lpthread  
kali@kali:~/Desktop/assg 9$ ./server 1234  
[+]Local DNS Server Listening on port 1234.....  
  
[+]RequestHandler assigned  
-----  
google.com Not found in cache  
domain name = google.com  
nslookup -type=NS .  
d.root-servers.net.  
nslookup -type=NS com d.root-servers.net.  
a.gtld-servers.net.  
nslookup -type=NS google.com a.gtld-servers.net.  
ns2.google.com.  
nslookup -type=A google.com ns2.google.com.  
142.250.196.14  
Address : 142.250.196.14  
resolve Query : Answer = 142.250.196.14  
google.com Not found in cache  
[+]New Cache Entry : A google.com 142.250.196.14  
[+]Response Sent  
END  
-----  
[+]RequestHandler assigned  
-----  
A google.com 142.250.196.14  
google.com Not found in cache  
domain name = google.com  
nslookup -type=NS .  
b.root-servers.net.  
nslookup -type=NS com b.root-servers.net.  
a.gtld-servers.net.  
nslookup -type=NS google.com a.gtld-servers.net.  
ns2.google.com.  
nslookup -type=AAAA google.com ns2.google.com.  
2404:6800:4007:829::200e  
Address : 2404:6800:4007:829::200e
```

Local DNS Server is able to resolve queries of type A, AAAA, NS and CNAME as shown below:

```
kali@kali: ~/Desktop/assg 9  kali@kali: ~/Desktop/assg 9
kali@kali:~/Desktop/assg 9$ nslookup -type=A google.com -port=1234 127.0.0.1
Server:      127.0.0.1
Address:     127.0.0.1#1234
Non-authoritative answer:
Name:   google.com
Address: 142.250.196.14
kali@kali:~/Desktop/assg 9$ nslookup -type=AAAA google.com -port=1234 127.0.0.1
Server:      127.0.0.1
Address:     127.0.0.1#1234
Non-authoritative answer:
Name:   google.com
Address: 2404:6800:4007:829::200e
kali@kali:~/Desktop/assg 9$ nslookup -type=CNAME www.nitc.ac.in -port=1234 127.0.0.1
Server:      127.0.0.1
Address:     127.0.0.1#1234
Non-authoritative answer:
www.nitc.ac.in canonical name = cnet.nitc.ac.in.
Authoritative answers can be found from:
kali@kali:~/Desktop/assg 9$ nslookup -type=NS google.com -port=1234 127.0.0.1
Server:      127.0.0.1
Address:     127.0.0.1#1234
Non-authoritative answer:
google.com  nameserver = ns3.google.com.
Authoritative answers can be found from:
kali@kali:~/Desktop/assg 9$
```