Lab Exercise 2: Configuring a recursive name server or caching only name server

Files involved:

```
      named.conf        -  bind configuration file
      root.hint         -  hints file which is the list of 13-root-servers
                        Filename of root hints can be anything.
                        contains authoritative localhost data.
      0.0.127.in-addr.arpa. - loopback reverse zone. (127.0.0.1)
                        contains authoritative reverse mapping
                        for 127.0.0/24 addresses
```

1. create a separate directory to be used for recursive server

```
      % mkdir /var/named/recursive
      % cd /var/named/recursive
```

2. download the root hints file from rs.internic.net or from
   our lab ftp server 192.168.100.1 login apnic and the password is apnic

```
      % ftp 192.168.100.1
      % ascii
      % mget root.hint
```

3. create the recursive configuration file (named.conf) under
/var/named/recursive

```
      % vi named.conf
```

```
// named.conf example
// specify bind's working directory
options  {
      directory "/var/named/recursive";
      };

// recursive/caching name server configuration
zone "." {
      type hint;
      file "root.hint"
      };

// configure the loopback reverse zone
zone "0.0.127.in-addr.arpa." {
      type master;
      file db.127.0.0;
      };
```

4. create the reverse loopback zone (localhost) under /var/named/recursive

```
      %vi db.127.0.0

$TTL 1d
@     SOA   localhost.  root.localhost.   (
                        1     ;serial no.
                        30m   ;refresh
                        15m   ;retry
                        1d    expire
                        30m   ;negative cache ttl
                              )
            NS    localhost.
1           PTR   localhost
```

5. Try running bind with -g and -c named.conf and see if bind complains for errors.

```
      % named -g -c named.conf
```

6. If internet connection is working, try using your recursive name server to query other RRs in the internet.

      *Test recursive name server to get an A & AAAA record of www.apnic.net

```
      % dig @127.0.0.1  www.apnic.net
      % dig @127.0.0.1  www.apnic.net  AAAA
```

      *Test your recursive name server to query other RRs like SOA, MX, PTR. To verify that your server caches information, query the same RR twice and compare the query time.