

Running the program:

On the command line you can run the program by using the command:

```
python mydig.py <"domain-name"> (Be sure to include quotations in domain name)
```

For example : `python mydig.py "www.cnn.com"`

My code uses the dnspython library in order to iteratively resolve a domain name into an IP address by going down from the root server all the way to the authoritative server.

It begins by extracting the domain name from the command argument and initially creates a message to query using the `dns.message` method `make_query()`. We establish a udp connection to query the root server. Upon receiving its response we extract the top level domain and query once again. At this point, there is a possibility that our "additional" section will have no IP addresses, so we must create another query using a given name server. Eventually our code queries the authoritative server and receives the information we are looking for. Finally our code outputs the final IP address along with additional information. I kept track of the query time by placing time stamps at the start and end of the program using python's built in time modules.