

CSE 310 Assignment 2 - Computer Networks; DNS Resolver

All code is for Ubuntu **Python 3.7**

Must install dnspython

Included in dnspython folder in zip

`sudo python3.7 setup.py install`

INSTRUCTIONS FOR mydig.py

`python3.7 mydig.py <domainname>`

If you want to pipe to output, use

`python3 mydig.py > mydig_output.txt`

If you want to output how the address was resolved, set `showWork = True`

If it takes too long, interrupt using Ctl C, and try again.

INSTRUCTIONS FOR digTester.py

Default uses bash dig. set `useMydig = True` to test mydig.

Test all 25 websites

`python3.7 digTester.py`

Test top (x+1) website where $0 < x < 25$

`python3.7 digTester.py`

Part B

Local DNS and Google DNS resolved the first request quickly, and made most subsequent requests instantly (in 0ms), bringing down the average by a factor of 10. Google DNS was slower than local DNS.

mydig.py was significantly slower than both local DNS and Google DNS. Some .cn domains failed to resolve.

The 25th and 75th percentile for local DNS and Google DNS were 0, since many requests were made instantly after the initial request. For mydig.py, they were very close to the mean, thus another graph was not included as it would've been repetitive.

See excel file for raw data and other stats. Graph of mean resolving time for n=10 is included on next page.

Mean (10)

