

- **Set of websites used for this plot:**

['Google.com','Youtube.com','Facebook.com','Baidu.com','Wikipedia.org','Reddit.com','Yahoo.com',
'Google.co.in','Qq.com','Taobao.com','Amazon.com','Tmall.com','Twitter.com','Google.co.jp','Instagram.co
m','Live.com',
'Vk.com','Sohu.com','Sina.com.cn','Jd.com','Weibo.com','360.cn','Google.de','Google.co.uk','Google.com.br'
]

- As stated in the assignment, I ran 3 experiments over these websites to measure the performance of our DNS resolver.

1. **Experiment 1:** Ran my dns resolver 10 times for each website and calculated the average runtime to resolve these 25 websites.
2. **Experiment 2:** Ran my local DNS resolver 10 times for each website and calculated the average runtime to resolve these 25 websites.
3. **Experiment 3:** Ran google's public DNS resolver 10 times for each website and calculated the average runtime to resolve these 25 websites.

- Below is the CDF graph of DNS resolution times for above 3 experiments. Here is my observation for the same:

1. The local DNS resolver (in blue line) had the least amount of runtime for most of the websites and it was very quick. The reason behind the same is due to the fact that local DNS is located very near to us and it must have maintained a cache for resolved domain names. This has contributed to the faster response times.
2. Google's public DNS (in yellow line) worked the second best in this case because it might not be located in close proximity. But it still works very fast and even better than local DNS for some of the websites. Again, cache usage is one of the main reasons behind the faster response times.
3. My DNS resolver (in green line) lacks a bit here, majorly due to the fact that it doesn't have the cache capability yet (unlike dig tool). Due to this, for each domain, the DNS request has to be made again and again to the servers which results in longer response times.

