

# COMP3331/9331 Computer Networks and Applications

## Assignment Mark Request for Term 2, 2023

<b>Language:</b>	Java
<b>Basic Version</b>	
<b>Limitations/Issues</b>	<b>Possible Solutions</b>
<p>Make sure recursion desired variable in Client in the function constructDNSQuery is set as false.</p> <p>If I get a response from a server that has no answers and no referral IP's but it does have an authority section this is the only time I will look up the authority sections nameservers to try and obtain extra referral IP addresses.</p>	<p>none</p>

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Enhancement 1: Error Handling	
Limitations/Issues	Possible Solutions
none	none

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Enhancement 2: Advanced Records and Reverse DNS	
Limitations/Issues	Possible Solutions
Doesn't support PTR queries due to not having time to add the parsing code. For mx queries the preference values are the numbers displayed	Wouldn't have to do too much accept do add a little extra parsing code to create the question name for PTR queries.

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<b>Enhancement 3:</b> Performance reporting	
Limitations/Issues	Possible Solutions
<p>Some of the domains I was testing were not resolvable, so I had to comment out all the System.exit(1) lines when running the performance report.</p> <p>When testing my local resolver, a problem that was happening is due to the script continually creating new clients to send a query to the resolver for each of the different domains. If the resolver got stuck on resolving one domain, then the corresponding client for that query would time out and then a new client and thus query would be made while the previous query is still being resolved at the resolver. And thus the resolver wouldn't even get to process those requests as they would just timeout.</p>	<p>Find 7000 resolvable domains so the System.exit(1) lines won't be used.</p> <p>Should have done the timing in the resolver instead of the client and then have client timeout set to a really large number as then this problem wouldn't happen.</p>