

COMP3331/9331 Computer Networks and Applications

Assignment Mark Request for Term 2, 2023

Language:	Python 3		
Basic Version			
Limitations/Issues		Possible Solutions	
<div>1. Both the client and server are single threaded and can handle only single connection at the same time.</div> <div>2. We are using the UDP for the basic version which doesn't guarantee package delivery.</div>		<div>1. Make the server multithread so it can handle multiple client at the same time.</div> <div>2. Make a version TCP or ACK message enhancement for the reliability.</div>	

COMP3331/9331 Computer Networks and Applications

Assignment Mark Request for Term 2, 2023

Enhancement 1:	Client Multiplexing:	
Limitations/Issues		Possible Solutions
1. Client is not multithread which means it can send only one DNS query to the resolver.		1. Make the Client multithread so it can handle multiple queries at the same time.

COMP3331/9331 Computer Networks and Applications

Assignment Mark Request for Term 2, 2023

Enhancement 2:	Error Handling:	
Limitations/Issues		Possible Solutions
1. We are using the general except for the error handling which can lead to ambiguous error messages.		1. Using the multiple except statement to catch different types of error messages so we can resolve them on the coding side if necessary.

COMP3331/9331 Computer Networks and Applications

Assignment Mark Request for Term 2, 2023

Enhancement 3:	Handling Long Messages:	
Limitations/Issues		Possible Solutions
1. Message size exceeds the maximum size limit than the truncated bit is set.		1. To handle long message correctly, DNS response header should be checked for a Truncate bit set and client should initiate a TCP connection.