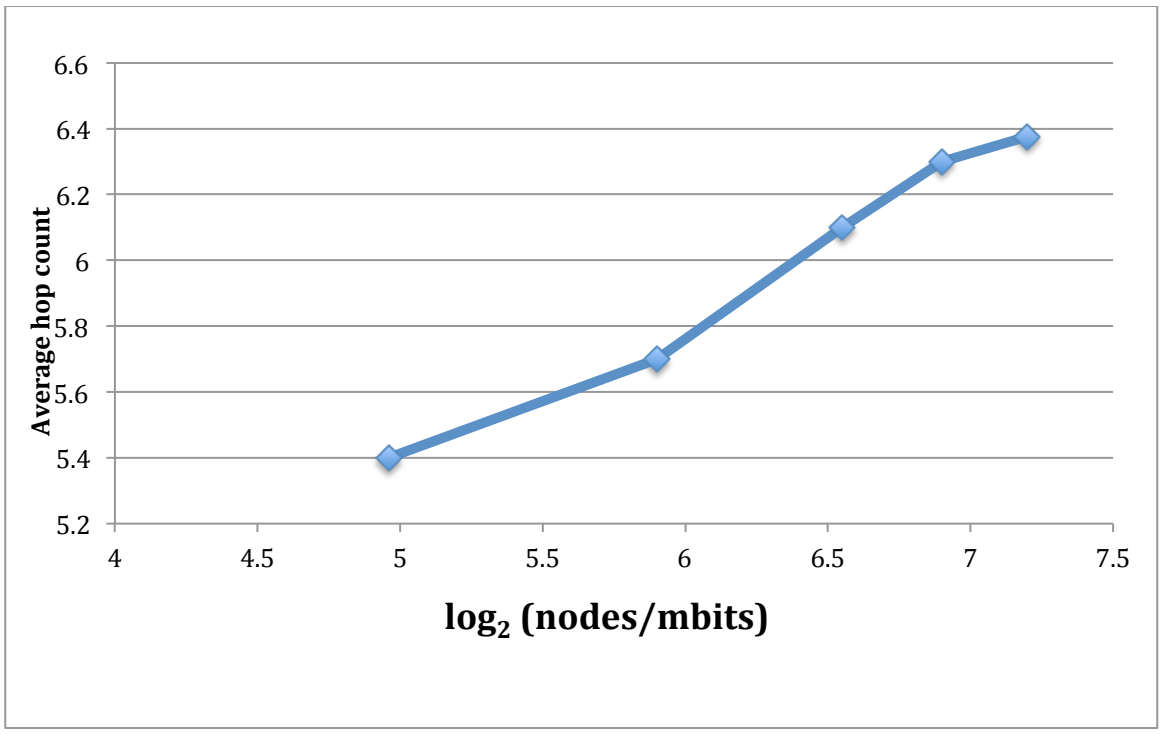
Analysis of number of nodes vs average hop count over mbit hash code

We have taken different values for number of nodes and verified that the average hop count is equal to $\log_2$(noOfNodes/mbits)

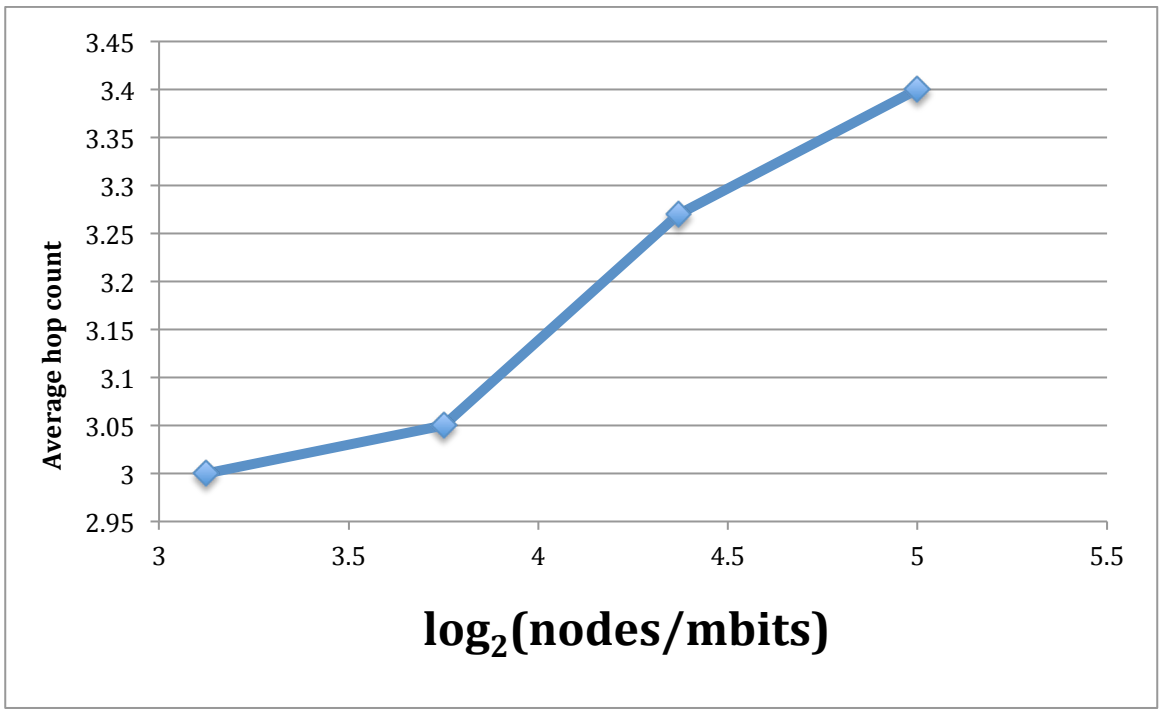
In this table, the value of mbits = 32

Nodes	$\log_2$(nodes/mbits)	Average hop count
1000	4.96	5.4
2000	5.9	5.7
3000	6.55	6.1
4000	6.9	6.3



In this table, the value of mbits = 16

Nodes	$\log_2$(nodes/mbits)	Average hop count
50	3.125	3
60	3.75	3.05
70	4.37	3.27
80	5	3.4



Bonus part :

For the bonus part, we were able to periodically stabilize the chord ring and update the finger table. But when we try to kill a node using ***GenServer.stop(:global.whereis_name(<printedNodeIdString>, :normal)*** it crashes while updating the finger table.