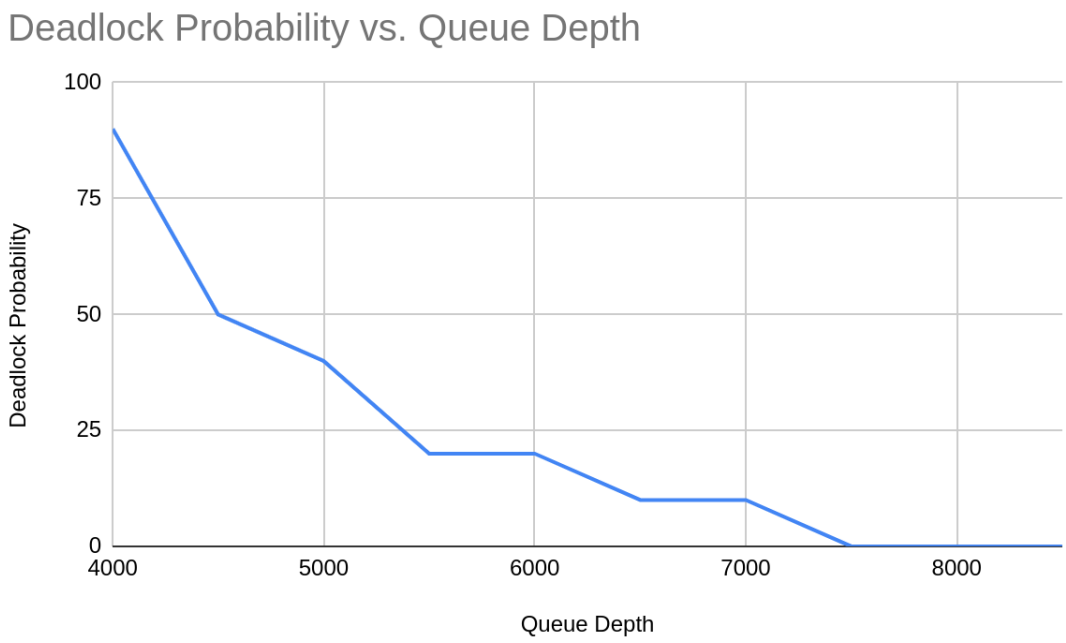
The degree of success for the assignment is 100% as code for both the process scope and system scope is running and I was able to produce both the required graphs.

The average execution time for the process scope with 20,000 donuts is 8.92 seconds and for the system scope is 5.2 seconds.

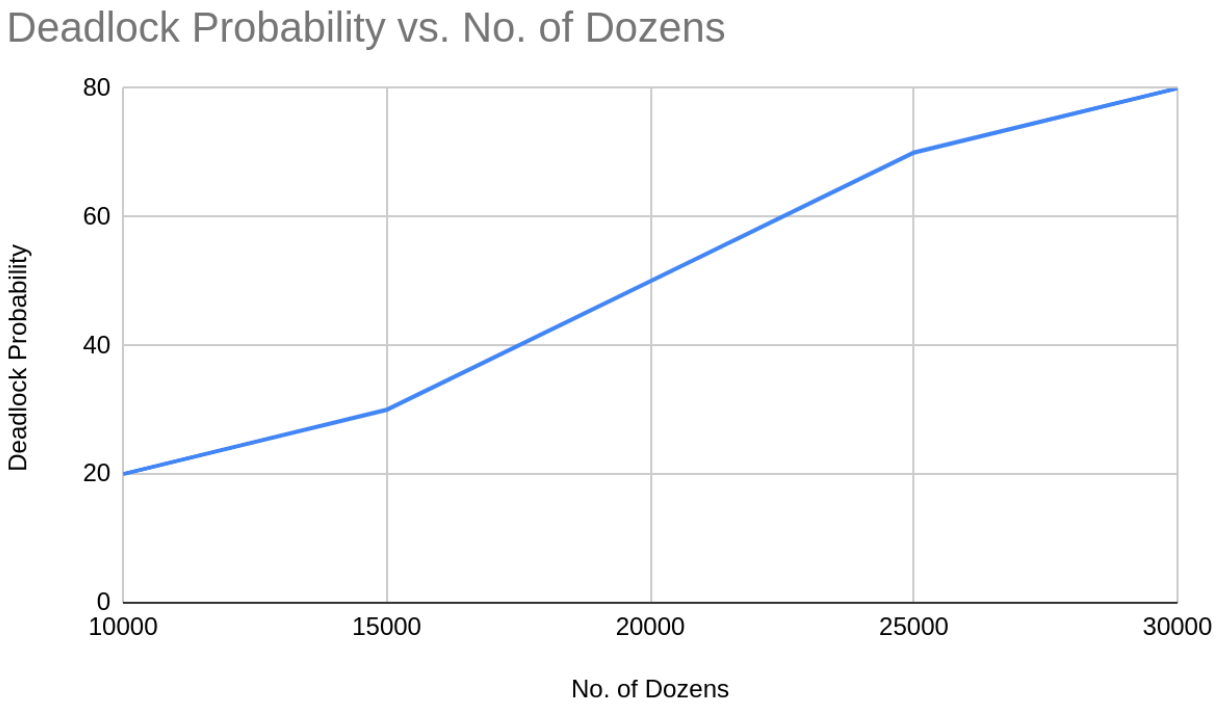
The average execution time for the system scope is less than the process scope.

Deadlock percentage for both the process and system scope is 20% when the number of producers is 30, the number of consumers is 50, the number of dozens to be collected is 20000 at queue depth size of 6000.

Queue Depth size for the 50% deadlock is 4500 when the number of producers is 30, the number of consumers is 50, and the number of dozens to be collected is 20000. The deadlock Probability Distribution graph is given below:



Deadlock Probability Distribution graph for the different number of dozens to be collected is shown below when number of producers are 30, number of consumers are 50 and queue depth size is 4500:



As the process goes on for a longer amount of time it is expected that the probability of deadlock will increase linearly.

Name: Alok Malik
Email: alok_malik@student.uml.edu