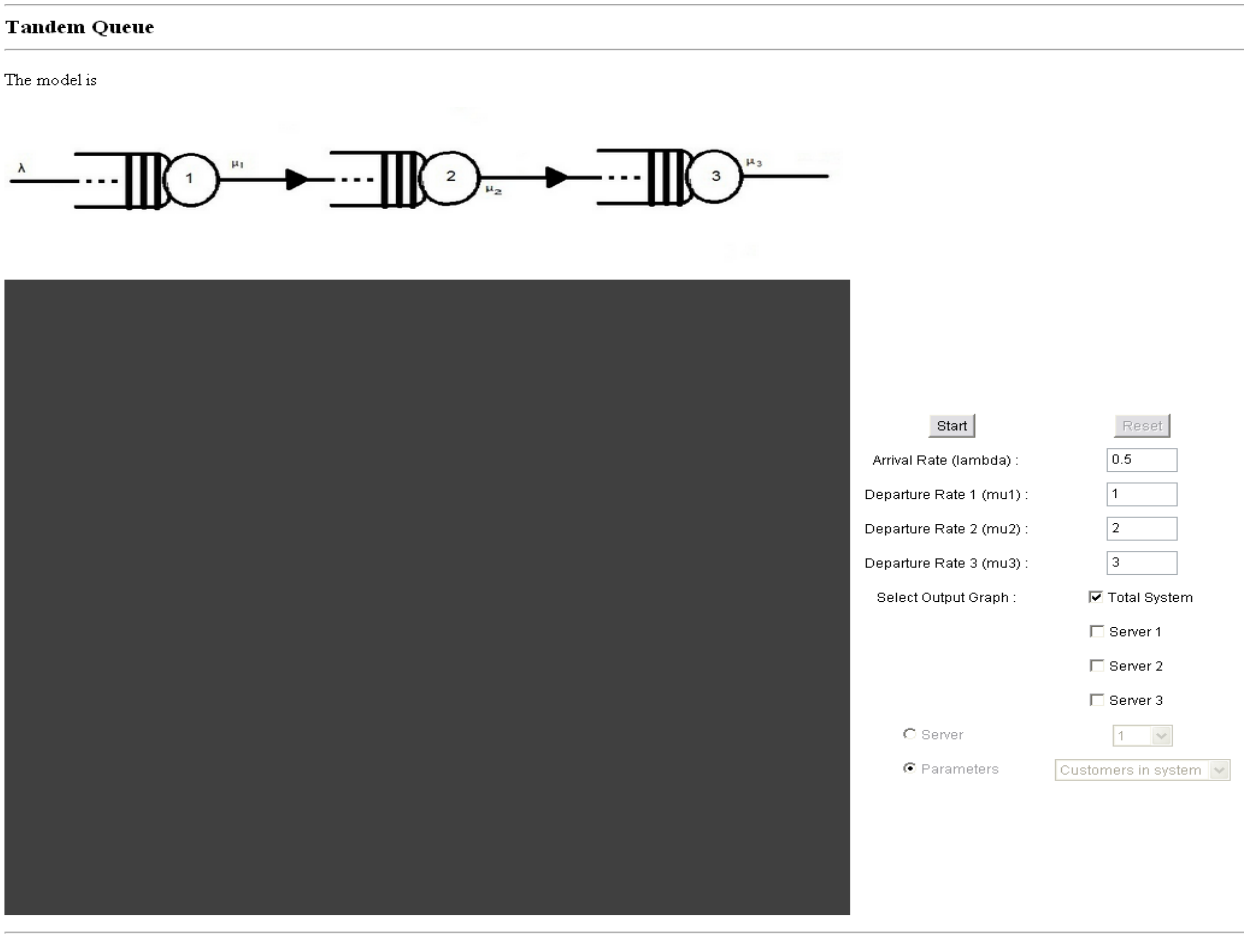
Example:

The repair facility shared by a large number of machines has three sequential stations with respective rates 1/hr, 2/hr and 3/hr. The cumulative failure rate of the machines is 0.5/hr. Assuming that the system behavior can be approximated by a three-stage tandem queuing network shown below, determine the measures of effectiveness of the system. Each stage of repair can accommodate infinite number of machines.

Solution:

The arrival rate of the customer is $\lambda = 0.5$ and the service rate at node i is i/hr. In order to obtain the measures of effectiveness, in steady state as well as via simulation, we follow the steps as shown below:

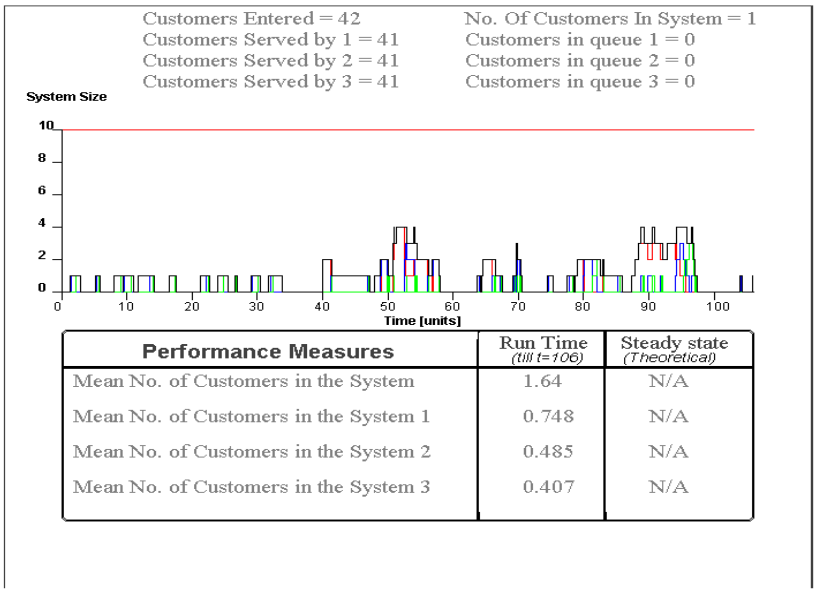
- Open the page where the experimentation is to be performed
- Feed the data as shown:

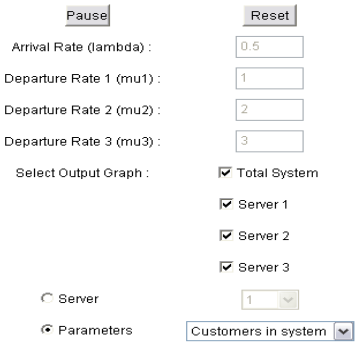


- Click on **'Start'** button and we see the following:

Tandem Queue

The model is





- In the simulator, we are able to see graphs of the number of customer at each node (since Server1, Server 2 and Server 3 are ticked on the right side of the window)
- We also see an option for **'Parameters'** from where we can choose the measure of effectiveness required.