### Problem :

#now let's say you are a bank operations manager, and you would like to know how many

tellers you need if your bank is visited by around 20 customers per hour and the average

serving time is exponentially distributed we a Mu of 10 minutes.

note that the capacity of the bank is only 30  customers inside the bank.

#M, M , K ,30,inf, you want the maximum waiting time to be 10 min per customer until She/he is served.

Simulate a waiting line system for the bank and for loop multiple Ks to get to the requested number of servers that satisfy the above conditions.

Please try to answer the questions first and then have a look at the solved script.

Multiple services

at the same bank you made a further analysis, and you found out that the bank actually has two services, the teller service, and the customer service support .the customers come to the bank to register for either a teller or a customer service support , you have found out a customer takes around 30 seconds to register and 55% of the customers go to the tellers while 45% of the customers got to the customer service support, customers still arrive at an exponential rate of 150 per hour, the teller service takes 11 minutes with a standard deviation of three while the customer service takes an exponential rate of 12 minutes. what is the mean waiting time of the system if you have 15 tellers and 15 customer service specialists?

All the best,

Haytham

Rescale analytics.