Assignment 8	You should submit the assignment in a pdf format. For the data analysis, any software can be used, but please make sure to submit the file that contains your analyses too. (Excel file or R codes, etc.).
Due date: March 29th, 2021	
A:30% B:30% C:40%	

Impact of the Frequency of Camps and Target Inventory on Shortage and Wastage

MBB is interested to analyze the impact of different policies on the platelets' shortage and wastage. Suppose that the shelf life of platelets is 7 days, the target inventory is 1400, and the donation cams are held every day. For both supply and demand, 10,000 random observations are provided in Data.csv file.

A) Assume that the target inventory is decreased to 300 units. Calculate the daily average wastage and shortage for the blood bank. What could be the reason for such changes in the wastage and shortage?

B) MBB is considering to decrease the donation camp's duration by 3, 4, and 8 hours which leads to 10%, 20%, and 60% less supply for each period, respectively. How do the average shortage and wastage change as the supply decreases? Should MBB reduce the donation camp's duration? (When you reduce the daily supply, round down the values that are not integer.)

C) MBB is willing to examine the impact of decreasing the frequency of donation camps on the percentage of wastage and shortage. What would happen if the donation camps are held every other day instead of every day? Based on your results, discuss the effect of reducing the frequency of donation camps. In order to determine the supply for each day when the frequency is decreased, you can assume that the supply of day i $(i = 1, 3, 5, \dots)$ is equal to the supply of day i plus the supply of day $i + 1$ $(i = 1,2, 3, \dots)$, and the supply of day $i + 1$ $(i = 1,2, 3, \dots)$.