Assignment 8

The purpose of this assignment is to introduce numerical techniques in regards to for and while loops and introduce conditional if statements. The student will learn th logic of the iterative and progressive nature of loops and think logically of the true and false nature of conditional statements. Moreover, if statements are true, the program will continue into the set of prescribed statements and if false, will skip over the statements and proceed to the next block of statments.

The student will be submitting a .m file. Please understand that there exists an infinite number of ways to process the following problem (This means no two progams should be the same and there exists a program that utilizes no loops or if statements), but I would like to see loops and if statments in your .m file.

As you may have already notice, the programs being assigned will increase in difficulty. The fact of the matter still remains, you can solve anything if you break it down into simple words and convert them into logical code. It is best to analyze what the words mean in terms of logic, math, and finally code. Get the overall concept of the program first before you start codeing. It is best to also draw a diagram and what not. Do not just dive into the code. plan it out!

0.1 Problem After Problem!

You are an intern for a very generic engineering company. They would like you to automate and organize some information coming in every week. That information being numbers for pricing on recent orders. The company, for some reason, prioritizes higher value orders first. That is, the most expensive order gets processed first and the cheapest gets processed last. After that, the company can only ship n orders a day and must ship all orders by the 7th day (the 7th day can be the remainder. It does not neccesarily have to be n. It can be greater than or less than n). The orders for this week are provided in the attached .mat (a .mat file usually means a saved variable that you can use in a .m file).

There are additional fees for the first three days for priority and what not. The orders shipped on the first day, will cost and addtional $100, the second day will cost $50, and the third day costs $25. The last day will get a discount of $25 if their order is greater than $100 for inconvenience.

How many orders will be processed a day and what is the total range (That is max and min) of orders will be sent out for those days respectively? This includes all fees and discounts. Keep in mind the company doesn't care about the individual numbers, they only care about the range of the prices and the number of orders so that they can prioritize, categorize, and check the orders for shipment.

In your final answer, I would like you to produce three 1 by 7 row vectors respective to the 7 days. Those three vectors being the number of orders, the max cost, and the min cost.

I require you to use atleast one loop and one if statement in your program.