Take home midterm modeling problem. Due when you take the midterm.

**No help from anyone besides the Teacher**

In 2019, you had a visitor that claimed that they could see the future. They provided the closing stock price of Citibank, Apple, Facebook and Walmart for every fifteen days for the year (see class discussion). The file is on Canvas as stocksprices.txt. It is 17 days. Unfortunately you did not believe the visitor. Find out how much money your lack of belief caused.

If you had believed, you would have put in $1000 into an electronic stock exchange account. There was a $25 opening fee. Every time you had a transaction, you pay $7. You can only buy whole stocks. You should also prohibit buying and selling on the same day.

Build the integer program 12 points. 3 points for your solution in a readable format.

To help understand. I put in $1000 and had a balance of $975. The citibank stock price is 60.81. I decided to buy 15 ( I do not have enough money to buy 16 shares). My bank balance is 975-15\*60.81-7 = 55.85. I sell the stock two weeks later (two time periods) when it is 68.43. My bank balance is 15\*68.43 -7+55.85 = 1075.30. If I had better purchasing strategies, I could make more money. Over the course of the year, I am hoping I can turn a nice little profit.

Note: Over a ½ year of data, my OPL model took over 10 minutes to solve. So you are only looking at every 15 days of stock closings. My program took 30 seconds to run. You may want to check out the statistics tab in OPL and watch the convergence. Also check out the engine tab and watch branch and bound go. If you are not using opl, you will probably need to decrease the number of periods to allow excel to run. It took my computer about 45 seconds to solve.