Stock Analysis

You are given a list of top N stocks and the %change in their value for each hour starting at 9,10,11,12,13,14.
The stock which has highest %change is called best performer in that hour. The stock which has lowest %change is called worst performer in that hour.

1. Build a MinPQ and MaxPQ to find out top 5 best performers and bottom 5 least performers for each hour. (Note: You need to build 1 (one) MinPQ and 1 (one) MaxPQ for every hour. If two stocks have same %Change then preference should be given based on decreasing order of names)
2. Build a binary search symbol table with key as a stock name, and value as frequency of that stock as best performer at each hour.
   Example: Suppose TCS appears 3 times in top 5 best performers out of 6 hours, the frequency of TCS will be 3.
3. Build a binary search symbol table with key as stock name, and value as frequency of that stock as worst performer at each hour.
4. Find frequency of a given stock as best performer. If stock hasn't performed even once as one of the top 5, its frequency will be 0.
5. Find frequency of a given stock as worst performer. If stock hasn't performed even once as one of the least 5, its frequency will be 0.
6. Find out stocks which appeared both in best and worst performers at least once.

Input format:
First line of the input contains an Integer (N) represents no. of stocks present in every hour.
From second line to 6*N lines contains stocks data for all the 6 hours.
Next line of the input contains an Integer (M) represents no. of queries will be given.
Next M lines represent query data.

Stock data:
Stock data will have two attributes (Name and %Change) separated with comma.

Query data:
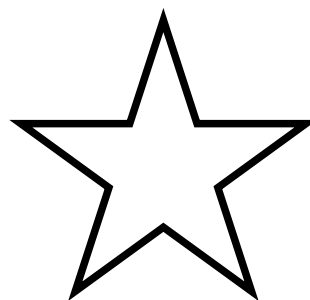Queries are of two types
get
intersection

EX:
get,maxST,Sanofi India
get,minST,3M India
intersection

Note: maxST represents the BinarySearch Symbol Table that contains the frequencies of best performers.
Note: minST represents the BinarySearch Symbol Table that contains the frequencies of worst performers.

methodName,symbolTable,stockName Where get method should print frequency of that stock occurs in given Symbol table.

If stock doesn't present in Symbol table then it should print 0.

For intersection, print the common stock names present in both the Symbol tables.

Output format:

For every hour print the maximum 5 stocks (stock Name and %Change separated by space).

Print an empty line.

For every hour print the minimum 5 stocks (stock Name and %Change separated by space).

Print an empty line.

For queries print the output as explained above in query data.