You work for a stock brokerage firm and your manager would like your help in determining how much money is spent in commissions for all the brokers. Prepare a stock report to help track the commissions.   
  
INPUT  
  
The input should contain the name of the broker, the amount of the transaction, an indicator that the transaction was a purchase or sale (“P” or “S” in the Transaction Type field), and an indicator of the exchange where the transaction took place (“N” = New York Exchange; “A” = American Stock Exchange; “O” = Over the Counter).   
  
PROCESSING  
  
The transaction type should be edited to insure the user enters either an “S” or “P” and appropriate error messages should be developed for incorrect responses.  
  
The exchange should be edited to insure the user enters either an “N” , “A” or “O” and appropriate error messages should be developed for incorrect responses.  
  
The commission amount is calculated as follows: If the transaction was a Purchase on the New York Stock Exchange (NYSE), the commission is 4.5% (.045) of the transaction amount. If the purchase was on the American Stock Exchange (AMSE), the commission is 3.5% (.035) of the transaction amount. Otherwise, the commission is 3% (.03) of the transaction price. If the transaction was a Sale on the New York Stock Exchange (NYSE), the commission is 2.5% (.025) of the transaction price; otherwise, the commission is 2% (.02) of the transaction price.   
  
OUTPUT  
  
A sample of what should be displayed for output is shown below:  
  
  
Jim has earned $XX.XX in commissions on XXXX.XX transactions.  
  
Would you like to enter another salesman?  
  
When the user indicates there are no more entries the program should display the following:  
  
Total salesmen processed X  
Total transactions for all salesmen XX  
Total commission for all salesmen $XXXX.XX  
  
The program’s code should be structured and well commented. The program should validate all data entered using functions. (Only S and P allowed for transaction type, only N, A ,or O for the type of stock exchanged used, and only positive numbers entered for transaction amounts) Round all output to two decimal places