

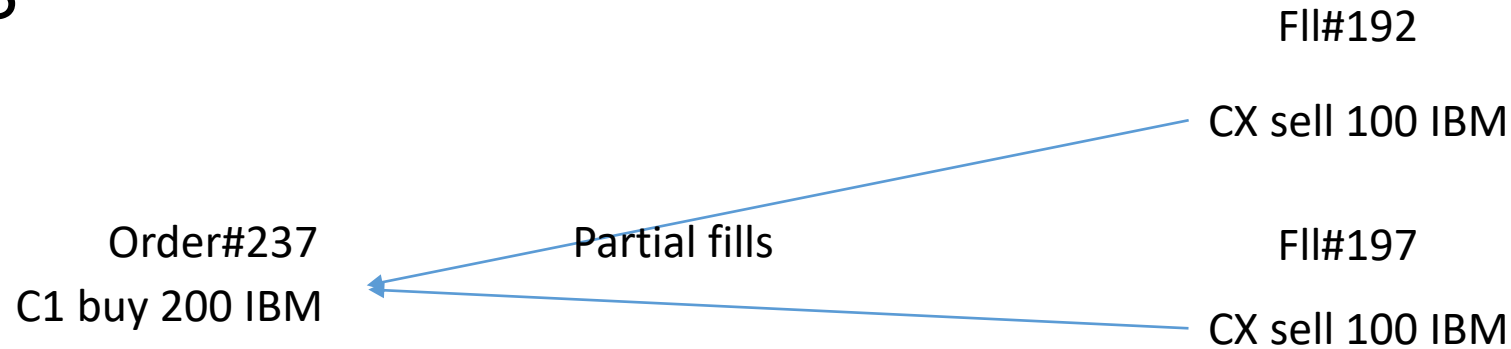
Equity Market

Midterm

Customers (cust)

- Submit orders to buy or sell shares
- Each order has its own unique number, number of shares, symbol, and side (buy or sell)
- When this order reaches the market, there are other market participants who wish to (sell or buy) shares..on the same symbol
- But different quantities.
- So Customer C1 submits an order (id=237) to buy 200 shares of IBM
- Some other customer (it does not matter who they are) submits an order sell 100 shares of IBM. The 100 shares are sold to C1 this is a partial fill at 221.10. Another customer also submits an order to sell 100 shares of IBM.
- This is second partial fill and also routed to C1 at 221.02

Fills



Execution 192 fillQty=100 fillPx=221.10

Execution 192 fillQty=100 fillPx=221.10

Execution 197 fillQty=100 fillPx=221.02

Order#237 filled by fills 192,197

200 shares at average price of (221.06)

Here max fillPx is 221.10 and min fillPx is 221.02

Difference between the two is 0.08

There may be other orders where this diff is 0.17 or 0.02.

Q6,7 are asking you to compute max,min and the order for which the difference between the two is least.

Filled and unFilled

- When $\text{OrderQty} = \text{SUM}(\text{partialFillQty})$ --- order is filled
- (ignore if SUM is slightly above the orderqty)
- When $\text{OrderQty} < \text{SUM}(\text{partialFillQty})$ --- order is unFilled
- Volume – $\text{SUM}(\text{fillQty})$
- DollarVolume – $\text{Sum}(\text{fillQty} * \text{fillPX})$
- In the example above 200 is volume and $22102 + 22110 = 44212$ is dollarVolume.