Coding Task

Below are three structures new\_order, change\_order and cancel\_order

The task is to implement the OrderBook class. The print method should display the current buys and sells sorted so highest buys first and lowest sells. The buys / sells would be aggregated on price level. So if more than one order is at the same price then the volume is added together

struct new\_order

{

    uint64\_t order\_id;

    char     side; // 'B' = Buy , 'S' = Sell

    int32\_t  price;

    uint32\_t quantity;

};

struct change\_order

{

    uint64\_t order\_id;

    int32\_t  new\_price;

    uint32\_t new\_quantity;

};

struct cancel\_order

{

    uint64\_t order\_id;

};

class OrderBook

{

public:

    void OnNewOrder(const new\_order& order);

    void OnChangeOrder(const change\_order& order);

    void OnCancelOrder(const cancel\_order& order);

    void Print();

};

/\*  Need to implement the above functions

    Print will show an order book with the highest prices buys first and lowest priced sells

    This is an aggregated view of the order book with orders at the same price combined

    so something like:-

    Buys

    Price Quantity

    100     10000

     99     2000

     98     1000

    Sells

    Price Quantity

    102     7000

    103     2000

    104     9000

\*/

    104     9000

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