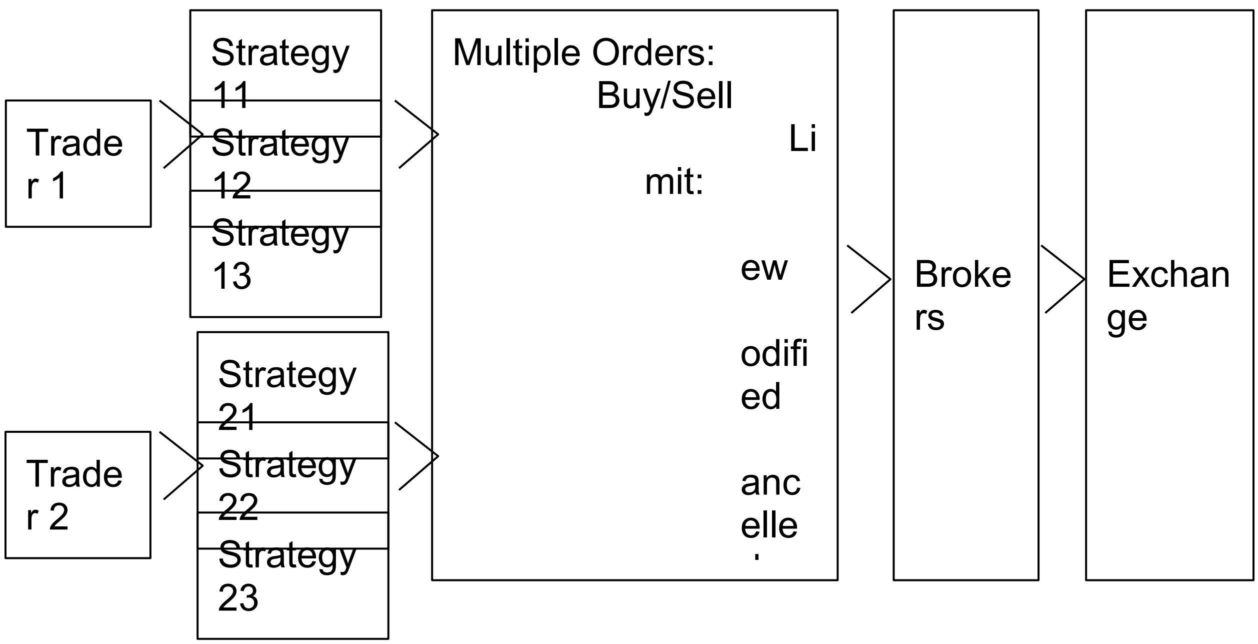
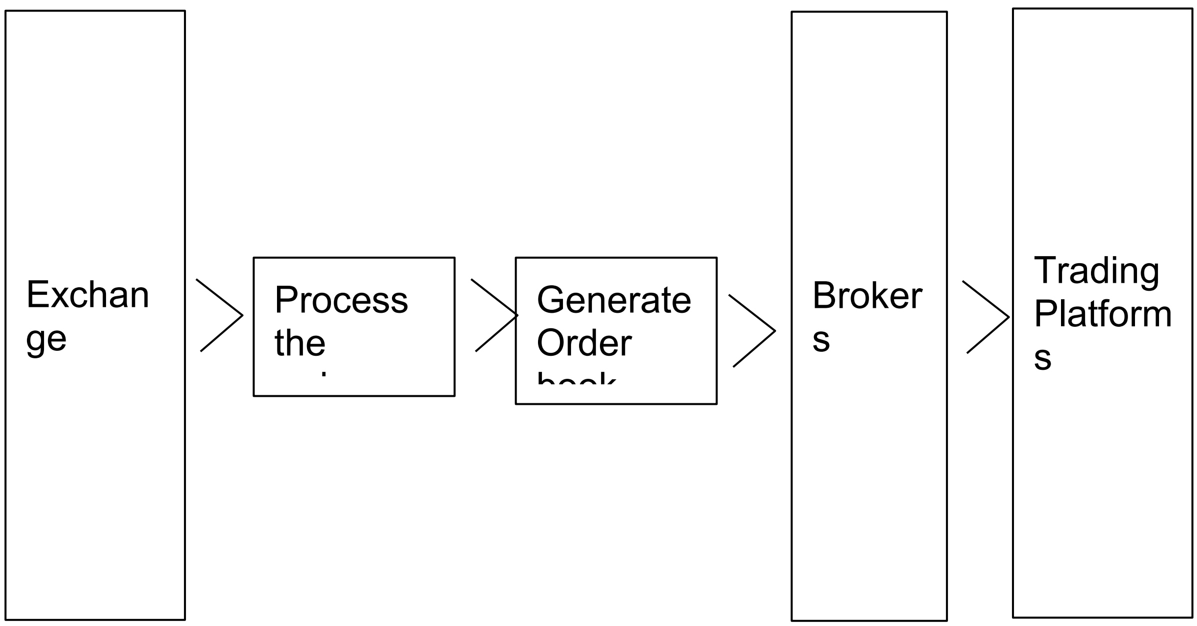
MMT-01 Summary Document

- **Algorithmic Trading:** is the use of a computer program to follow a defined set of instructions for placing the order and deciding various aspects of the order, such as time, price and quantity of the order.
  - Algo trading helps us to identify and react to the opportunity faster in the market. Also, it reduces emotions and increases discipline.
  - It also helps us to track multiple accounts and multiple markets simultaneously.
- **Prices:** For each trading interval, four price points are available open, high, low and close.
- **Participants/Traders:** There are two kinds of participants: buyers and sellers. Participants place orders as bid and ask.
- **Orders:** Orders are trade instructions given by the market participants that specify the details like side(buy or sell), quantity and criteria.
- **Liquidity:** Liquidity can be defined as the flow of bid and ask orders in the given time interval. If the liquidity is high, it means it is easy to trade in the instrument and the slippage cost will be lower for the participants
- **Order Book:** The details of the bid and ask and trades at any given time is considered as an order book. The rule of the order book is, that the highest bid price in the market is the best bid and the lowest ask is the best ask. Most of the exchanges follow the price-time priority rule:
  - Price Time Priority: As per price-time priority, the bigger bid and smaller ask will be given precedence in trade execution. If the price is the same for the two orders then the time will factor will be used. The order that arrived earlier will be given priority in trade execution.
- **Tick:** The state of an order book in any given instance is the tick of the instrument. The tick includes the trades executed in the given instance with the bid/ask information.



Refer to the above diagram, which depicts the flow of orders from traders(buyer/sellers) to the exchange.

1. Each trader may have multiple strategies, and each strategy may generate multiple buy and sell orders.
2. Buy and sell are also alternatively called bid and ask orders.
3. These orders will go to the respective brokers.
4. Brokers will route it to the exchange.



Refer to the above diagram, which depicts the order book processing flow

1. The exchange processes the orders received from the brokers, converts them into trades and update the order book.
2. The brokers can access the order book and the ticks

Types of Orders

- **Market Order:** Executes at the current best price available.
- **Limit Order:** is an order placed to buy or sell a security at a specific price. A buy limit order can only be executed at the limit price or lower, and a sell limit order can only be executed at the limit price or higher.
- **Stop Order:** A stop order is also alternatively called a stop-loss order, which is an order to buy or sell an instrument once the price of the instrument reaches a specified price, known as the stop price.