**Assignment# 01**

**Analyze and Design the Detailed Class Diagram for FOREIGN TRADING SYSTEM) Also generate Java Code.**

A company stated that **“Our example application focuses on a commodity trading environment.** We assume that the application supports trading and related activities at a single location. For purposes of analysis, we are concerned with two functions: the act of monitoring and gathering market information, and the act of completing a commodity trade”.

The main users of the systems are the traders, who perform individual trades from their desks, mostly over the phone. Traders are supported by personal workstations, connected to larger corporate servers (or administrators in our parlance). Traders rely on many sources of market information, some informal and some formal; the workstation is used to convey some of this market information, which is provided by the system of interest in two forms: pricing information and market news, from both wire services and financial information providers. Pricing information includes current prices of specific commodities (e.g. oil) for different time periods. Market news includes press releases, demand and supply forecasts, wire stories, etc. The system must collect, filter, and disseminate this news to traders.

A trader executes a trade after completing a negotiation with another trader (called a counterparty in commodities parlance). To complete the trade, a formal contract must be generated specifying the terms of the deal (e.g. volume, price, quantity, delivery date, mode of transportation, or combination thereof). In addition, the trader's position in the commodity being traded must be updated appropriately. The position is captured in a schedule often known in the industry as a slate, which gives a summary of all agreed to receipts and deliveries for a given <commodity, location, month> combination, as defined by all contracts pertaining to that combination. Receipts and deliveries of a trade are called its legs.

When a counterparty trader wishes to trade a commodity she contacts a company trader and the request to trade the commodity is announced. The company trader analyzes the offer to trade.  For a detailed discussion of this phase see the “analyze potential trade” use case. The terms and conditions of the deal are then discussed and negotiated with the counterparty trader. This constitutes acceptance of the trade. Upon acceptance, a new trade is created. The details of the trade are registered with the trade administrator. The trade administrator makes a permanent, persistent record of the trade details and notifies the position administrator of the trade. If the trade falls within an existing slate, that slate is simply updated with the details of the new trade. If no previous trades for the same commodity, movement location and movement period have been made, the position administrator creates a new slate. In either case a permanent, persistent record of the slate state is made. The trade administrator provides the trade information to the market data service for internal news distribution. Finally, the trade administrator requests the Contract Administrator to produce a formal printed contract.