Software Engineering (CS213)

<u>Tutorial 3</u>

1. Draw the physical first level DFD for the following scenario.

    Innobix is a distribution outlet for the latest brands of PC products. Most of the customers are retail outlets that make bulk orders. When a customer makes a request over the telephone, the sales executive will check the customer's credibility. If the customer has a poor credibility, then the order will not be taken. Next, the sales executive will check the stock status and advise the customer on the time of delivery. If there is sufficient stock, then the delivery can be made the next day, otherwise there will be a lead-time for Innobix to order from their suppliers. The status of the order is tracked from the customer order record.

    The order is then passed to the procurement department. Here, the stock that is due for the customer is reserved, and, if there are any shortfalls, a purchase order is generated based on the shortfall and the supplier information. A copy of the purchase order detail is printed and sent to the inventory department to receive the parts from the respective suppliers.

    The inventory department will deliver any products that are ordered the next day. In the case when there is a shortfall, the products will be delivered when a shipment for the shortfall arrives. However, the supplier may make a partial delivery so the products received will have to be checked against the printed purchase order details. The stock information and customer order record will have to be updated. The inventory department will have to inform the accounts department that purchases orders must be paid. Normally, payment will only be made when there is a complete shipment.

2. Create a State Transition Diagram that describes typical student states, and how they change based on specific action and events