Tutorial Objective:

to demonstrate understanding of the concept of levelling.

Remember that a levelled set of Data Flow Diagrams consists of a Context Diagram,
Level 0 diagram (major functions), and one or more lower levels of the tasks within
each function.

Tutorial Task:

1. The business process of daily invoicing is as follows: at the beginning of the day the
stack of sales orders with their associated dispatch notes is taken from the in-tray and
processed. The details of each order are checked against the details of the relevant
customer account and a discount is calculated. Trade customers are allowed a
discount of 15% off the listed price. There is also a special 5% discount for any
customer who has been ordering regularly for two years, provided that the customer
has not already received the trade discount. Any order over $1000 is allowed a bulk
discount of 10% off the listed price in addition to any other discounts. If the total to
be invoiced exceeds the customer's credit limit a note is sent to the manager prior to
the dispatch of the invoices. When all invoices have been dispatched a note of the
total amount invoiced is sent to the manager.
Represent this business process as a levelled set of Data Flow Diagrams.

2. A theatre accepts postal and telephone bookings for its forthcoming performances up
to a period of six months in advance. About half of the bookings are directly from
the public, the remainder being from agencies.
When a member of the public makes a booking by telephone, either a credit card
number is taken and the booking is firmly made, or a reservation for the seat is taken.
In the latter case the member of the public must collect and pay for the ticket at least
half an hour before the performance.
In the case of agencies, on receipt of a block booking request by phone or mail, the
theatre runs a credit check on the agency account and makes out a confirmation note
for those requested seats that are still available. This is sent to the agency as both a
confirmation of booking and an invoice. At the end of each month the theatre sends a
statement of account to each agency.
Half an hour before the performance starts all those seats that have been reserved by
the public but have not been collected are released for general sale.
The theatre also receives inquiries on seat availability from both agencies and the
public.
Draw a levelled set of data flow diagrams to illustrate the data flows, processes and
stores necessary to carry out the invoicing, enquiry and booking facilities of the
theatre.

3. Undertaking a unit is an organisational process which a student goes through when
obtaining a MIMS degree. Draw a levelled set of data flow diagrams that illustrate
the process at Monash. Consider all the functions which must be undertaken in order
to successfully complete a unit in the Masters degree. Subdivide these functions into
the individual low-level processes that you go through.