

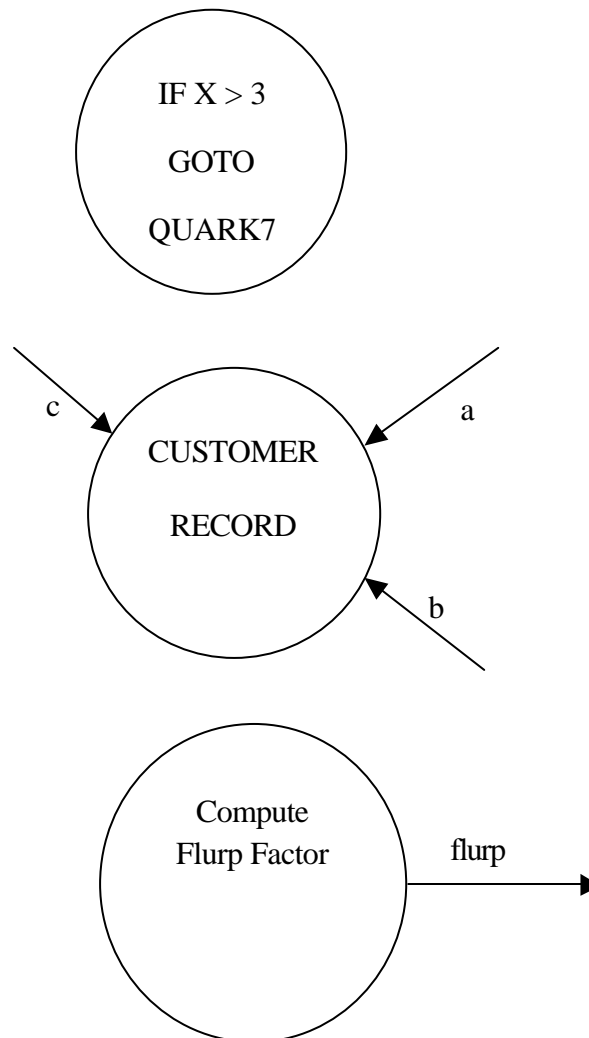
MONASH UNIVERSITY

CSE3308 Software Engineering: Analysis and Design

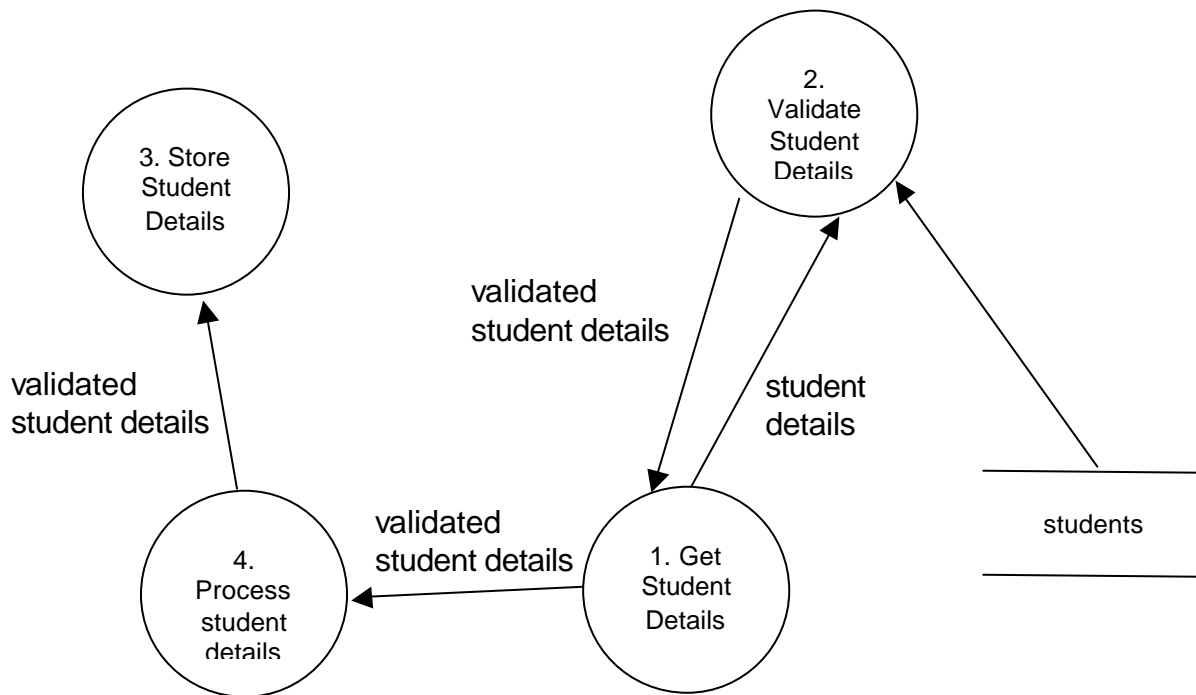
Practice Class 3

Structured Analysis 1

a) What is wrong with the following processes?



b) Comment on the problems in the following DFD.



c) Write a Structured English version of the following specification, provided orally to a system analyst working on a project to computerize a manual system:

“When I get a purchase order, my job is to pick a supplier from our file of available suppliers. Of course, some suppliers get eliminated right away because their price is too high, or because they’ve temporarily “blacklisted” because of poor quality. But the real work that I do is to pick the optimal supplier from those that qualify – the one that will deliver our order in the shortest amount of time. My boss had a system for estimating delivery time, and he taught it to me, but at this point I just look at the supplier’s location, the quantity of items being ordered and the date we need the goods, and I know which supplier will be the best one... I’m not even sure how I do it any more.

d) A new Australian venue management company has contracted you to develop their new on-line booking system for entertainment events (sports, concerts, etc.). The main processes of the system are:

- **Search for an event.** In this process, a customer provides any of: the (perhaps partial) name of the event, the date and the venue. The system searches for all events matching all of the customer’s criteria, and displays a list of these matching events to the customer, showing the name of the event, the date and the venue.
- **View detailed information for an event.** After locating an event by searching, the customer can choose to view detailed information for any event in the list of matching events. When the system displays events to the customer (as described above), each event is associated with a unique ID that can be returned to the system via the user interface. When a customer chooses to view detailed information for an event, the system informs the customer of the various ticket categories available for the event (e.g. “Gold”, “Silver” and “Bronze”), the price of tickets in each category and the number of tickets remaining in each category.

- **Book tickets for an event.** In this process the customer provides the system, via the user interface, with the ID of an event, and the number of tickets that he/she would like to book in each category. The system checks that the requested tickets are available, and, if so, prompts the customer for credit card details so that payment can be completed and recorded. If the requested tickets are not available, the customer is informed for what actually is available, and asked to re-enter the booking request. If the credit card cannot be validated (by the external Credit Card System), the customer is prompted to enter details of another card. When a booking is completed, the details are sent to a separate Dispatch System, which arranges for the printing and posting of the tickets to the customer. The system must also decrement the number of tickets remaining in each category as appropriate.
- **Register an event with the system.** This process allows an administrator to record a new event in the system, which then becomes available to customers. In order to gain access to this functionality, the administrator must enter a username and password. The administrator then enters the name of the event, the date(s), and selects the venue from list of venues known to the system. If the venue is not known to the system, the administrator can choose to add it. The administrator is then prompted to enter the price of each ticket category for that event at that venue. The system records the details of the event in its database.
- **Add a venue to the system.** This process allows an administrator to add a new venue to the system's database. After gaining access with a username and password (if not already logged in), the administrator enters the name of the venue, and the number of ticket categories available at that venue. The system then prompts the administrator to enter the name of each category, and the number of seats available in that category.
 - Draw a Context Diagram for the system described above.
 - Draw a Figure 0 Data Flow Diagram for the above system.

Notation Guide

Data Flow Diagrams

