

Janet Hubert, the manager of the systems department, has decided that she needs to take a proactive measure. She is requesting the funds to purchase a CASE system for approximately \$75,000 that requires about two months to install and train workers to use it. The president of the company, Mike Cassidy, initially responded by questioning the wisdom of taking the systems personnel away from their duties when they are backlogged so they can learn a system. Prepare a memo from Hubert to Cassidy. In the memo, outline the expected benefits of purchasing and using a CASE system, and address Cassidy’s concern regarding the two-month training and implementation period.

2. DATA FLOW DIAGRAMS

Sawicki Music Supply is a mail-order business that accepts merchandise orders by telephone and mail. All payments must be prepaid with a major credit card. Once an order is received, either the item is found in inventory and shipped immediately, the item is not found in inventory and is ordered from the manufacturer, or a notice is sent to the customer indicating that the item is no longer stocked.

Required

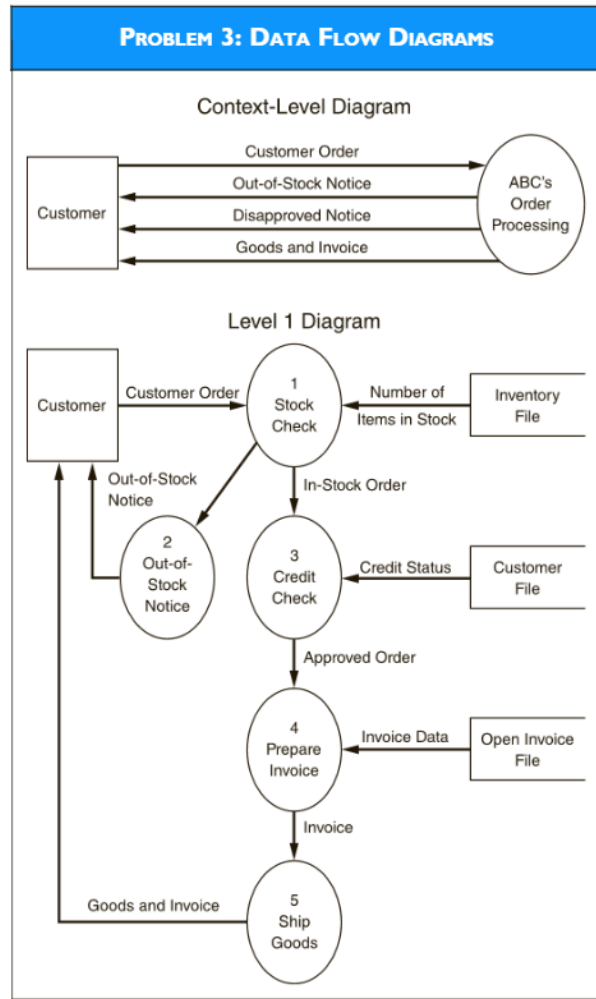
Prepare a context-, intermediate-, and elementary-level data flow diagram for Sawicki Music Supply. For the elementary-level diagram, explode the inventory function.

3. DATA FLOW DIAGRAMS

Examine the context and intermediate (Level 1) data flow diagrams in the diagram for Problem 3 and indicate what is incorrect about them.

4. DESIGN INPUT VIEW

During the system design phase of the SDLC, input interfaces or input views must be sketch out so programmers can specify the necessary elements when they program the user interfaces for the system. Figure 14-12 presents an interface for a Reorder Report. Sketch a similar interface that could be used to program a sales invoice interface. Include areas for a document heading, customer information, shipping information, sales employee information, and items sold.



5. SYSTEMS DESIGN

Robin Alper, a manager of the credit collections department for ACME Building Supplies, is extremely unhappy with a new system that was installed three months ago. Her complaint is that the data flows from the billing and accounts receivable departments are not occurring in the manner originally requested. Further, the updates to the database files are not occurring as frequently as she had envisioned. Thus, the hope that the new system would provide more current and timely information has not materialized. She claims that the systems analysts spent three days interviewing her and other workers. During that time, she and the other workers thought they had clearly conveyed their needs. She feels as if their needs were ignored and their time was wasted.

Required

What went wrong during the systems design process? What suggestions would you make for future projects?

6. ATTRIBUTES AND OPERATIONS

Prepare a list of attributes and operations for the following items:

- a. general ledger
- b. accounts payable ledger
- c. accounts receivable ledger
- d. fixed assets ledger
- e. inventory ledger

7. COMMERCIAL SOFTWARE

Robert Hamilton was hired six months ago as the controller of a small oil and gas exploration and development company, Gusher Inc., headquartered in Beaumont, Texas. Before working at Gusher, Hamilton was the controller of a larger petroleum company, Eureka Oil Company, based in Dallas.

The joint interest billing and fixed asset accounting systems of Gusher are outdated, and frequent processing problems and errors have been occurring. Hamilton immediately recognized these problems and informed the president, Mr. Barton, that it was crucial to install a new system. Barton concurred and met with Hamilton and Sally Jeffries, the information systems senior manager. Barton instructed Jeffries to make the new system a top priority. Basically, he told Jeffries to deliver the system to meet Hamilton's needs as soon as possible.

Jeffries left the meeting feeling overwhelmed because the IT department is currently working on two other very big projects, one for the production department and the other for the geological department. The next day, Hamilton sent a memo to Jeffries indicating the name of a system he had 100 percent confidence in—Amarillo Software—and he also indicated that he would very much like this system to be purchased as soon as possible. He stated that the system had been used with much success during the past four years in his previous job.

When commercial software is purchased, Jeffries typically sends out requests for proposals to at least six different vendors after conducting a careful analysis of the needed requirements. However, due to the air of urgency demonstrated in the meeting with the president and the overworked systems staff, she

decided to go along with Hamilton's wishes and sent only one RFP, which went to Amarillo Software. Amarillo promptly returned the completed questionnaire. The purchase price (\$75,000) was within the budgeted amount. Jeffries contacted the four references provided and was satisfied with their comments. Further, she felt comfortable because the system was for Hamilton, and he had used the system for four years.

The plan was to install the system during the month of July and try it for the August transaction cycle. Problems were encountered, however, during the installation phase. The system processed extremely slowly on Gusher's hardware platform. When Jeffries asked Hamilton how the problem had been dealt with at Eureka, he replied that he did not remember having such a problem. He called the systems manager from Eureka and discovered that Eureka has a much more powerful mainframe than Gusher. Further investigation revealed that Gusher has more applications running on its mainframe than Eureka does, because Eureka uses a two-mainframe distributed processing platform.

Also, the data transfer did not go smoothly. A few data elements being stored in the system were not available as an option in the Amarillo system. Jeffries found that the staff at Amarillo was very friendly when she called, but they could not always identify the problem over the phone. They needed to come out to the site and investigate. Hamilton was surprised at the delays between requesting an Amarillo consultant to come out and the time in which he or she actually arrived. Amarillo explained that it had to fly a staff member from Dallas to Beaumont for each trip.

The system finally began to work somewhat smoothly in January, after a grueling fiscal year-end close in October. Hamilton's staff views the project as an unnecessary inconvenience. At one point, two staff accountants threatened to quit. The extra consulting fees amounted to \$35,000. Further, the systems department at Gusher spent 500 more hours during the implementation process than it had expected. These additional hours caused other projects to fall behind schedule.

Required

Discuss what could have been done differently during the design phase. Why were most of the problems encountered? How might a detailed feasibility study have helped?