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Exercises and Problems

7. Develop an activity diagram based on the following narrative. Note any ambiguities or questions that you have as you develop the model. If you need to make assumptions, also note them.

   The Purchasing Department handles purchase requests from other departments in the company. People in the company who initiate the original purchase request are the "customers" of the Purchasing Department. A case worker within the Purchasing Department receives the request and monitors it until it is ordered and received.

   Case workers process requests for the purchase of products under $1,500, write a purchase order, and then send it to the approved vendor. Purchase requests over $1,500 must first be sent out for bid from the vendor that supplies the product. When the bids return, the case worker selects one bid and then writes a purchase order and sends it to the vendor.

8. Develop an activity diagram based on the following narrative. Note any ambiguities or questions that you have as you develop the model. If you need to make assumptions, also note them.

   The Shipping Department receives all shipments on outstanding purchase orders. When the clerk in the Shipping Department receives a shipment, he or she finds the outstanding purchase order for those items. The clerk then sends multiple copies of the shipment packing slip. One copy goes to Purchasing, and the department updates its records to indicate that the purchase order has been fulfilled. Another copy goes to Accounting so a payment can be made. A third copy goes to the requesting in-house customer so he or she can receive the shipment.

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Case Study

The Spring Breaks 'R' Us Travel Service

Spring Breaks 'R' Us (SBRU) is an online travel service that books spring break trips to resorts for college students. Students have booked spring break trips for decades, but changes in technology have transformed the travel business in recent years. SBRU moved away from having campus reps with posted fliers and moved to the Web early on. The basic idea is to get a group of students to book a room at a resort for one of the traditional spring break weeks. SBRU contracts with dozens of resorts in key spring break destinations like Florida, Texas, the Caribbean, and Mexico. Its Web site shows information on each resort and includes prices, available rooms, and special features. Students can research and book a room, enter contract information, and pay deposits and final payments through the system. SBRU provides updated booking information, resort information updates, and travel information for booked students when they log in to the site.

The resorts also need access to information from SBRU. They need to know about their bookings for each week, the room types that are booked, and so forth. Before the spring break booking season starts, they need to enter information on their resorts, including prices and special features. Resorts need to be paid by SBRU for the bookings, and they need to be able to report and collect for damages caused by spring breakers during their stay.

SBRU has recently decided to upgrade its system to provide social networking features for students. It is currently researching possibilities and collecting information from prospective customers about desirable features and functions. From the business standpoint, the idea is to increase bookings by enhancing the experience before, during, and after the trip.

1. Who are the stakeholders for SBRU? For each type of stakeholder, what aspects of the SBRU booking system are of particular interest?

2. What are the main functional requirements for the major subsystems (i.e., resort relations, student booking, accounting and finance, and social networking)?

3. Describe some usability requirements for students, booking interactions, and social networking interactions.

4. Assuming that social networking at the resorts will require wireless communication and connection to the Internet, what are some reliability requirements that resorts might be asked to maintain? What are some performance requirements? Is this a bigger issue because resorts are in international locations?

5. What are some security requirements? Is there any reason why students in Europe, Asia, or other locations could not book rooms through SBRU? What issues might be anticipated?

6. To collect information on functional requirements for the social networking subsystem, what are some techniques that might be used? Be specific and include some sample questions you might ask by using various techniques.