Covers material in Chapter 7

Data file needed:

- **none**

Data files to upload to Moodle:

- **Alexamara.docx**

Alexamara Marina Group Case

For the following exercises, you will address problems and answer questions from the Alexamara Marina Group staff. You do not use the Alexamara database for any of these exercises.

1. The following log includes four transactions that completed successfully. For each of the four transactions, list the transaction ID and the table(s) modified. Also, list whether the modification to the table added, changed or deleted a record.
2. Suppose a catastrophe destroys the database just after 11:10. Which transactions in the sample log shown would the recovery program use to update the restored database? Which transactions would have to be reentered by users?
3. If two of the four transactions started at different times, deadlock could have occurred. Describe an adjustment to the log that would create deadlock between these two transactions.

Transaction ID	*Time*	*Action*	*Record Updated*	*Before Image*	*After Image*
1	11:00	Start			
2	11:01	Start			
1	11:02	Insert	ServiceRequest (16)		(new values)
3	11:03	Start			
2	11:04	Update	Marina (1)	(old values)	(new values)
3	11:05	Update	Owner (EL25)	(old values)	(new values)
1	11:06	Commit			
4	11:07	Start			
3	11:08	Update	MarinaSlip (2)	(old values)	(new values)
3	11:09	Commit			
2	11:10	Update	MarinaSlip (2)	(old values)	(new values)
2	11:11	Commit			
4	11:12	Update	MarinaSlip (2)	(old values)	(new values)
4	11:13	Update	Owner (EL25)	(old values)	(new values)
4	11:14	Commit			