COM 230

Exercise 11 Database Repair

One of the best uses of the outer joins is found in the ability to check the referential integrity of a database. The World and Cars databases were well designed and there are few if any problems in either of them. In the COM 230 / Charlie July 2011 folder there is a version of the Alpine database that has does have problems. We will use this set of tables to get experience in evaluating an existing database and making corrections to improve it.

1. Run the script Alpine.sql to create the tables and load them with data. The tables have all been given unique names so there will be no collisions with existing tables.
2. Run a SELECT COUNT(\*) on each table to determine the number of rows in each of the tables. Run Right and Left joins on the tables and note where there are unmatched key/foreign key fields. Print out your queries and list the number of “null” values and the columns in which they exist along with the table names. Table relationships that bear investigation include ab\_orders with ab\_orderline, ab\_orders with ab\_customer, ab\_inventory with ab\_orderline and ab\_shipping with ab\_inventory. Also take a look at ab\_inventory and ab\_color.
3. Work up a repair plan using ALTER TABLE queries as well as insert queries. You should make copies of all the tables and data as a backup in case your activities destroy or corrupt any existing data.
4. Repair the tables including primary keys in tables that seem to have a unique id field. Check for auto-increment as well Run queries to detail the revised create query for each table that is modified.
5. Run Right and Left joins to verify that your repairs have worked. Print out your queries.