The Institute of Interesting Things - Part 3

Maintenance and More Reporting

The Museum personnel are finding the new database is helpful in their day-to-day tasks. For part 3, we will modify the data associated with some of the artifacts, create tighter controls and generate more advanced reports.

Details

* The following bullet points should be put into a new script.
* A new column called DateDamaged must be added to the Artifacts table. This should be done with the alter table command.
* The Nixon self-portrait, worth $12,700.00 was received on December 18, 2018. On December 19, 2018, it was placed in room A14 on the right wall, plexi-case 14.
* On December 8, 1995, Lucky Burnside donated the 1900's American Jazz Trombone, valued at $25,000. On January 5, 1996, it was placed in room A14 on display stand 8. The lighting was poor so it was moved to display stand 11 in the same room on June 11, 1999. Several years later, on September 9, 2007, it was moved to room B7 on the shelves along the right wall.
* The velociraptor tooth replaced the jazz trombone on display stand 8, room A14 on June 11, 1999. It was acquired December 12, 1991 and valued at $2500.00.
* The trilobite fossil, valued at $150, was moved to display stand 11, room A14 on September 9, 2007. It was acquired on June 7, 2002.

Reports

* The following bullet points should be put into a new script.
* Create a SQL statement that displays all the rooms, all the locations and the average value of the items that were in that location.
  + The report should display the room, the detailed location and the average value.
  + The report should be sorted by the room and then the location.
* Create a SQL statement that displays all the artifacts and all their locations over time.
  + The report should display the artifact, the date at the location, the room and the detailed location.
  + If the items have been lost, show the room and the location both labeled as “Lost” and the date the item was lost.
  + The report should be sorted by artifact and then date.
  + The query must use the UNION statement. One query in the union will retrieve items that are not lost and the other query will retrieve items that are lost.
  + You may need to use a subselect to get the desired behavior, but it is not a requirement.
* Create a SQL statement that displays the artifacts and the number of days they have been on display.
  + The days on display are calculated by finding the earliest date an item was on display and subtracting it from today’s date.
  + If the item was lost, then the days on display are calculated by finding the earliest date an item was on display and subtracting it from the date it was lost.
  + The days on display should be a whole number.
* Create a SQL statement that displays a report of the items currently on display.
  + Lost items should not be displayed.
  + If an item has moved, only the last location should be displayed.
  + The report should display the artifact, the room, the detailed location (e.g. “glass case C3 on the upper right”) and the date at the current location.
  + The report should be sorted by the artifact and then the room.
  + This SQL statement must use one or more subselects.

Extra Credit (5 points)

* On February 4, 2003, a fire started in room A14 and all of the artifacts in that room were damaged by smoke. Write a SQL statement that sets the date damaged column to February 4, 2003 for all the items that were in room A14 on that date.
  + The statement must have logic that determines the items that were in the room on February 4, 2003. The only hardcoded parts of the statement should be the date and the room name.