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CIS 310

18 January 2023

Assignment 1

1. What are 3 of DBMS’s advantages over traditional File System Data Storage methods?
   1. **Enables data sharing**
   2. **Provides end user with integrated data view**
   3. **Provides more efficient and effective data management**
2. Explain the types of data anomalies using below table. Update, Insertion, and Deletion
   1. Update- **An example of the Update anomaly is the SPSS Course. The Employee ID was updated from 100 to 150**
   2. Insertion- **An example of the Insertion anomaly is the Java course. Considering it is the on the bottom, one can assume that is was the latest piece of data added, thus making it an insertion**
   3. Deletion- **It is hard to indicate a clear instance of the Deletion anomaly in this table. However, simply put, the Deletion anomaly is when a piece of data is removed or deleted.**
3. The textbook lists of database related career opportunities. Out of these options and other analyst positions (financial/marketing etc…), which one are you most interested? According to Google or other sources, what's the salary for that position in Kentucky (or wherever you are located)?
   1. **The career opportunity I am most interested in is Database Security Officer. I am a CIS major focusing on Cybersecurity, and this would be the best path for me if I had to choose. According to zippa.com, the average salary for a Database Security Officer in Kentucky is $97,408.**
4. Describe the relationship depicted in the Crow's foot ERD shown below:
   1. **Professor teaches one or more classes**
   2. **Class is taught by one and only one professor**
   3. **Professor advises one or more students**
   4. **Student is advised by one and only one professor**
5. Create a Crow’s Foot ERD to include the following business rules for the Sales company:
   1. Each sales representative writes many invoices.
   2. Each invoice is written by one sales representative.
   3. Each sales representative is assigned to one department.
   4. Each department has many sales representatives.
   5. Each customer can generate many invoices.
   6. Each invoice is generated by one customer.

Diagram

Description automatically generated