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--===============================CIS 310 ASSIGNMENT 1===============================

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/\* Fill in below section with your name, ID, and submission date. Also, update file name to reflect YOUR first and last name.

STUDENT NAME: Jacob Palmer

STUDENT ID: 5262256

SUBMISSION DATE: 1/12/2024

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1. What 2 businesses/organizations will you use for your learning examples? (10 points)  
-- You should name the businesses/organizations and write a brief summary of business, what’s its business model, what type of data is generated in its business operations, etc. Ideal summary is 2-5 sentences. It does not have to be exhaustive or perfectly correct but should demonstrate that you have an understanding of the business and some basic data they store.  
 *e.g. Tiny College. Tiny college is a non-profit higher education organization, whose main business function is offering education as a service to students. Through the college’s daily operations, we gather and store data on the college’s customers: students, their courses, schedules, grades, etc. We also keep tracks of employee data, consisting of professors who teach the classes, and administrators such as librarians, support staff and advisors. Physical building, IT support and equipment such as computers inventory are also information we need to keep track of.*  
-- Note that these are not set in stone and can be reviewed/changed as the semester progresses.  
-- Learning database theories with specific business contexts and example in mind helps deepen your understanding of these challenging concepts.  
-- In class, we will use Tiny College as our model business, therefore, colleges/higher ed **cannot** be one of your choices.

YouTube. YouTube is a video-sharing and social media platform owned by Google whose main business function is to provide a platform for people to upload videos and other content for the purpose of views and potentially even revenue. The type of data typically generated in its business operations include a channel’s current number of subscribers, ad monetization, specific tags a video has so it can be recommended appropriately, and potentially any pending reports or issues with said channel in order to keep it moderated.

GameStop. GameStop is a retailer that specializes in video games, consumer electronics, and gaming merchandise with a business model of selling these products to consumers and buying used products that customers can also bring in. The type of data typically generated in its business operations include the amount of stock for a given product, how much the product sells or buys for, products to expect shipments or other updates in the near future (i.e., restocking, new releases, recalls), as well as data pertaining to employees that work in the location.

2. What are **4** of DBMS’s advantages over traditional File System Data Storage methods? (5 points)  
--You should name the advantages and write a brief explanation, 1-2 sentences **each**, on its meaning using examples. You are encouraged to use the business/organization of your choice from 1 to walk through these explanations in context.  
--This should **NOT** be a copy and paste from textbook or any other sources.

* Reduce data redundancy/inconsistency through keeping all of the data in a single database file that will maintain and detect them as requested. Such as when dealing with anomalies (See Exercise 1), it becomes much easier to locate and remove these mistakes.
* Provides data security by allowing certain permissions or authorization to be given to different users depending on their role in the company. Customers wouldn’t be able to edit or view back-end data, managers can view and edit all data, and so on.
* Allows data sharing between multiple users or applications, such as for creating backups or forwarding current data to a higher-up for review.
* Data is integrated and stored in a centralized location so that it’s easier for users to find what they’re looking for rather than needing to find buried data that is scattered around.

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 in? According to Google, LinkedIn or other sources, what's the salary for that position in Kentucky (or wherever you are located)? (5 points)

I am the most interested in the role of a database developer, as I have some experience with programming, and already use Excel for a lot of my database management- both for classes and for my own personal hobbies (Though I am also acquainted with Access). According to Google (which in turn is from ZipRecruiter), the average annual salary for that job is $103,208 or a monthly salary of $8,585.

Of these, I am the most interested in

TABLE 1.3 
DATABASE CAREER OPPORTUNITIES 
JOB TITLE 
Database Developer 
Database Designer 
Database 
Administrator 
Database Analyst 
Database Architect 
Database Consultant 
Database Security 
Officer 
Cloud Computing 
Data Architect 
Data Scientist 
DESCRIPTION 
Create and maintain database-based 
applications 
Design and maintain databases 
Manage and maintain DBMS and databases 
Develop databases for decision support reporting 
Design and implementation of database envi- 
ronments (conceptual, logical, and physical) 
Help companies leverage database 
technologies to improve business processes 
and achieve specific goals 
Implement security policies for data 
administration 
Design and implement the infrastructure for 
next-generation cloud database systems 
Analyze large amounts of varied data 
to generate insights, relationships, and 
predictable behaviors 
SAMPLE SKILLS REQUIRED 
Programming, database fundamentals, SQL 
Systems design, database design, SQL 
Database fundamentals, SQL, vendor courses 
SQL, query optimization, data warehouses 
DBMS fundamentals, data modeling, SQL 
hardware knowledge, etc. 
Database fundamentals, data modeling, 
database design, SQL, DBMS, hardware, 
vendor-specific technologies, etc. 
DBMS fundamentals, database administration, 
SQL, data security technologies, etc. 
Internet technologies, cloud storage 
technologies, data security, performance 
tuning, large databases, etc. 
Data analysis, statistics, advanced 
mathematics, SQL, programming, data mining, 
machine learning, data visualization 

4. What does your success in CIS 310 Database Design look like? (5 points)  
-- This is entirely up to and unique to you. Ideal response are 1-2 sentences.

While there are many possible answers I can give, I personally believe my success in CIS-310 would look like databases that are detailed, organized, and optimized for searching.

5. Anything else I should know about you? (5 points)  
--This is open ended, feel free to share what you’d like. Your major, your interests, interesting facts, or anything important you’d like me to know. Most responses are 3-5 sentences, however, the length is entirely up to you.

I have previously mentioned using Excel-based databases for personal hobbies- which include video games (both playing and understanding the programming of), building with LEGO models, and listening to music while doing most things. This likely stems from the fact I am on the Autism spectrum, specifically Asperger’s. Furthermore, my major is listed as Computer Information System and track in a Web Development major- as that is the closest thing UofL has to video game programming.

For an additional fun fact, I was born on St. Patrick’s Day, and as such my favorite color is green- especially mint green. My favorite video games include Pokemon, Terraria, Minecraft, and other casual genres.

I look forward to taking this class, and I apologize for the delay in getting this specific assignment done.