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CYBR 410-342N

09/20/2020

WEEK 2: DBMS

A database management system is an application that provides users with the means to manipulate, analyze, and query data. Almost all DBMSs in existence today are developed to be used with relational databases.  Describe in a minimum 1-page essay (about 1,000 words, double spaced, APA format) a DBMS that you have dealt with at a company, or as a customer.  How was it used to help you access the data?

# Microsoft Access

Initially released in the early 90’s, Microsoft Access filled an incredible niche for the small and personal DBMS needs. It still remains a member of the Microsoft Office suite of applications but is being sunsetted. It is not supported in Office 365 but it is supported in the Office Suite Professional Edition. The removal of Microsoft Access from the SaaS offering signals its demise is soon. (Microsoft Access, n.d.)

My personal exposure was during the time up to and immediately preceding the Y2K time period. I was a college student at Louisiana Tech and was part of a wave student new hires due to a large grant given to the University to handle the influx of work modernizing some of their legacy systems. The role required me to shift from a green screen data entry system that fed into a homegrown Customer Relationship Manager database. There were limited batch printing functions for reporting as well as the ability to write custom queries for analysis but mostly it required days of lead time between the Mobility/Adaptation specialist performing the prosthesis work and whichever work study computer resources available to implement the request.

The first order of business was data modeling the workflows. This was exceptionally easy since the existing database was extremely flat and relatively small. For the rough spots, Microsoft Access, was leagues easier than our existing DB solution. Each of us student workers were able to work on our own desktop in isolation until we were ready for our part of the project to be finalized. The single monolithic nature of a Microsoft Access implementation was a boon of sorts. Entity Relationship Diagrams single snafu was getting drivers for a large format plotter to print. (Browne, n.d.)

The next order of business was establish creating the data entry forms. Again, the user friendliness of the Microsoft Office suite was a quantum leap above the previous infrastructure. At first, the individual student workers would grab a copy of the latest version of the base database file and work with each of the workers designing the forms to as closely match the existing workflows they were previously doing. Microsoft Access’s form designer allowed us to match the layout as best we could and more importantly provide contextual help of fields and other UX improvements. For instance, the previous database allowed for freeform entry on the two characters for states. Within Microsoft Access we were able to enforce input validation for correctness and capitalization. This is a minor feature, but it highlights how great of a product this was for the small to mid-size developer base. A database without quality data is useless. With a few clicks in the designer and some minor validation rules we were able to ensure that the form kept out of the way of the user’s ability to do their actual job. By the end, the student workers were more as a technical reference desk and quality control gatekeepers and the workers were modifying the forms to adapt to some optimizations.

The final phase of the project was creating and automating the daily, weekly, monthly, yearly, and ad hoc reporting. Again, this was a lift and shift of the existing reports onto the new implementation. Each developer would take the newest iteration of the database and would work autonomously on their specific report. Building the queries, formatting the results, and then reviewing with the end user to ensure it was acceptable. Once it was done the change was incorporated into the gold version.

It was probably one of the easiest projects I was involved in up to and including right now. Microsoft Access was revolutionary for what we needed. More powerful database engines existed but we didn’t need that. Raw HTML or writing a native app for the UX would have been smoother and cleaner but drastically overkill. (Cooper, n.d.) It really was the right sized tool for the list of requirements we had.

# Works Cited

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