



Database Project

I was hired at Zepeda Brothers Paint and Drywall to organize and run the customer service department. During my first week, I realized that there were several problems with the system being used to generate, track and complete work orders.

I knew that I needed a database solution and so I contacted Conan C. Albrecht of the Information Systems Department at Brigham Young University. He was very helpful in connecting me with students interested in working on the side to create a database. Matt Thomas and his friend Richard were by far the most proactive in responding to my needs for a database. They came to Las Vegas on a weekend to gather information and then completed the entire database in one month's time.

Listed below are the problems that we were experiencing in our department and the solutions that Matt and Richard provided through their database.

Problem: Work order Generation

The work order was to have a unique number that was being generated through one person who kept no log of the numbers used. The work order was generated on an Excel sheet and then saved with the homeowner's last or first name, lot number and then the unique number.

This system of work order generation led to many duplicate numbers, which were not caught until they went to the billing department. On the billing side everything was tied to the "unique" number. When duplication occurred, the number was given a new "unique" number by writing it on the hard copy over the duplicated number. Sometimes it was changed in the computer.

Solution: Unique number generation

The database totally eliminated the problem of duplicate numbers through the automatic number generation that was applied to each new work order.

Problem: Looking up work orders

The system of coding and saving work orders with the old system made it virtually impossible to search for work orders by the unique number.

Solution: Work order look up functions

The database provides a work order look up function and an edit existing work order function. These functions enabled us to improve our response time for questions.



Problem: Inability to track work history

The old system made it impossible to track the amount of customer service work within a given month or the materials that were associated with that work. The company had no tool to track the cost of warranty work vs. non-warranty.

The company had no tool to track reoccurring production issues. It was basically a server full of spreadsheets that provided me with no valuable information to make business decisions.

Solution: Database reports

In the first month using the database I was able to track exactly how much our company was paying to cover warranty production issues. With this information we will be able to adjust our contracts to cover warranty as well as fix production problems. I was able to track the breakeven for our customer service department and I was able to show that our department made the company over \$9,000 dollars above the breakeven. In almost two years that the company was operating, it never could provide information like this.

Problem: Account Receivable turnover

With the old system the accounting department was having problem billing due to incomplete or inaccurate information being sent over. Some of the accounts receivable were aging in the books for eight months. This negatively affected the cash flow of the company.

Solution: Daily reports

The database has helped to cut our accounts receivable turnover from months to weeks through its ability to accurately track work order generation through completion. This was probably our biggest bottleneck. Our company was able to produce a high volume of work, but we were unable to efficiently track the work in a way that allowed us to get paid in a timely manner.

The database has proven to be an invaluable tool in providing Zepeda Brothers with necessary information for future growth. It not only organizes our customer service information, but also analyzes the data in a way that helps us make good business decisions.

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