CAPSTONE FINAL REPORT

YOUNG ELECTRIC DATABASE

YOUNG ELECTRIC
594 GUN CLUB ROAD
CABOT, ARKANSAS 72023

DATE:
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TABLE OF CONTENTS

Project ORGANIZATION / SPONSOR

The Young Electric Database (YED) project has been created to address and correct these issues and prevent further loss associated with the current record keeping practices. The project was integrated into a database solution using an external website to provide a reliable database infrastructure.

PROJECT ANALYSIS

Problem

The YE project has been created to increase organizational in order to prevent further miscalculations resulting from lost paper receipts and disorganization. The costs associated with the successful design and implementation of this database will be recovered as a result of the anticipated reduction in miscalculations of labor and equipment cost for each customer.

Current State

The business objectives for this project are in direct support of Young Electric strategic plan to improve management of customers information and reduce costs associated with loss and waste. At present, customer information is managed via word documents stored in iCloud.

- Designed and tested a new SQL Database infrastructure
- Complete implementation of the new database infrastructure

Future State

The future state of YE project will be determined on the enhancement requirements of the company.

Options considered for moving to the Future State

Below is some possible options Young Electric to consider:

- The database could be built from scratch which allows for total customization capabilities.
- A database platform could be bought (fastest option).
- Design a database using a tool such as “nuBuilder Forte” (simplest way to create an online store).

"Helping to light your world!"

Project Plan

The decision was made to build the Young Electric Database we would use nuBuilder Forte, version 4.5. Using nuBuilder Forte will allow a much faster development and maintenance of the database. The costs associated with the successful design and implementation of this database will be recovered because of the anticipated reduction in miscalculations of labor and equipment cost for each customer.

Summary Milestone Schedule – List key project milestones relative to project start.	
Project Milestone	**Target Date (mm/dd/yyyy)**
• Project Start	09/30/2020
• Complete Solution Design	12/07/2020
• Complete Solution Simulation	03/01/2021
• Complete Solution Simulation and Testing	04/01/2021
• Deploy Solution	05/01/2021
• Project Complete	05/15/2021

PROJECT DESIGN AND DEVELOPMENT

The YE project will provide increased productivity to the company's infrastructure. The YE project will utilize improved technology in the form of SQL Database to provide real-time customer information via the internet. All software will be integrated into the company's current platform in order to establish increased security while allowing all systems and processes to continue without interruption.

Web Hosting Plans

The objectives which mutually support the milestones and deliverables for this project have been identified. In order to achieve success on the YE project, the following objectives must be met within the designated time and budget allocations:

- Create the tables used to store customers information within the next 60 days

- Develop web pages using nuBuilder Forte which has inherited HTML, JavaScript and CSS language within the next 90 days
- Achieve a simulated solution which allows testing within the next 120 days
- Implement the solution across the organization within the next 180 days

Data Architecture

This project must meet the following list of requirements in order to achieve success.
- The design and functionality must meet the specific requirements of the project sponsor
- The solution must be tested prior to deployment
- Solution must be implemented without disruption to operations

Additional requirements may be added as necessary, with project sponsor approval, as the project moves forward.

User Interface Plans

The following constraints pertain to the ISA project:
- Web application must be searchable and interactive
- The web application must display the customers information in a logical order
- Project mentors are available at any time to provide expert advice and resources for this project
- The project sponsor is wanting a fully functional front-end application

Coding / Use of Plug-in's or Software Choice

The use of nuBuilder Forte 4.5 nuBuilder Forte is a self contained application builder that both users and developers can be logged into at the same time. All nuBuilder Forte development is done as a logged in user. There is no separate tool needed to create Forms or Reports and all customization is stored in the database making it easy to back up and restore..

nuBuilder Forte is open-source. This means not only is it free to use but it can be hosted wherever you choose. A low-code tool like nuBuilder Forte means that a large part of your application can be created without writing any code, although most applications still require some code to validate fields or to update other tables in the database. Customising nuBuilder Forte can be done using PHP and Javascript.

Test Plans

To test the project and identify any possible bugs or issues. The owner of Young Electric and myself spent many hours testing and reviewing the functionality. This interaction clarified more in depth what the owner was looking for in a database. With his input I was able to modify the database to fit his needs.

PROJECT INSTALLATION AND MAINTENANCE INSTRUCTIONS

The following risks for the YED project have been identified. The project manager will determine and employ the necessary risk mitigation/avoidance strategies as appropriate to minimize the likelihood of these risks:

- Potential disruption to operations during solution deployment
- Links to other web pages not working
- Potential unavailability of web application due to server maintenance or are down
- Web application not mobile-friendly

PROFESSIONAL RESPONSIBILITIES

Alan Burks will be the project manager for the entirety of the Young Electric Database project. Alan Burks will be responsible for all tasks, funds, scheduling, communication, and research regarding the project. Any additional funding requirements will be made at the discretion of the client. Updates on project advancements will be given to the client at regular intervals

CLOSING THOUGHTS

I was unaware of a simple to use tool to help create a fully functional database. nuBuilder application did take some research and plenty of reading on how to get the most from the tool. I will use this tool again soon.

APPENDIX

The following table contains a summary budget based on the planned cost components and summary of programmingfor successful completion of the project.

Summary Budget – List component project costs	
Project Component	**Component Cost**
• Personnel Resources	$0
• Hardware	$0
• Software and Licensing	$0
• IT Lab Preparation	$0
Total	**$0**

Summary of Programming Hours	
Project	**Hours**
• Table Designs	100
• Programming / Research	350
• Testing	100
• YE Review / Testing	65
Total	**615**