

INTRODUCTION

Wellspring Interfaith Social Service in Fort Wayne, Indiana was founded in 1968 in an effort to provide opportunities to those in need. These opportunities include services such as a foodbank, clothing bank, youth and older adult programs. Throughout Wellspring's 52 years of service, Wellspring has directly impacted the lives of 7,822 youths, families and senior through their programs.



PROBLEM STATEMENT

With all the services that Wellspring has provided to the Fort Wayne community over the last 52 years, Wellspring has been running into issues of retaining and accurately keeping records. These issues are due to the lack of a centralized database system that can hold all data for all their programs. Due to the lack of funding and knowledge in how to properly implement a database system, Wellspring has resorted to storing all their data in multiple locations, these locations are Google Forms, Microsoft Access, Microsoft Excel, and Paper copies of the forms. With the data being dispersed a crossed multiple locations, Wellsprings has lost most of its historical data and is only able to retain data for an average of 3 years, in most programs. Due to mismanagement of the data

CUSTOMER NEEDS/SPEC

With the problem presented by Wellspring with the need for a centralized database system. Wellspring has identified the following needs.

- A centralized database system that can house all their programs.
- Design a database that can store multiple years' worth of data.
- Build a system that easily query data.
- Build a system that is easy to use and understand
- Help Wellspring establish an understanding of their data.
- Provide training on how to fix and troubleshoot the system.
- Ability to hold Volunteer and Employee data as well
- Develop the database in Microsoft Access

The QR code contains all forms related to the project.



CHALLENGES

While designing and working on this project many unforeseen challenges arose. Listed below are the major challenges associated with the Wellspring Database Project.

- No consistent way to assign primary keys to clients.
- Normalizing the database
- Attempting to make the system as user friendly as possible
- The scope of the project was larger than initially expected

These challenges made the database design completely unique and challenging to implement.

DESIGN CONCEPTS

For the design concept for the database, there was a major focus on ensuring that all clients that Wellspring is associated with was not only associated with the programs, but rather associated with Wellspring instead. To do this the ER diagram in figure 1 illustrates how, by connecting every program with a singular table it allows each client to be placed in different program, while storing all the data in one central location.

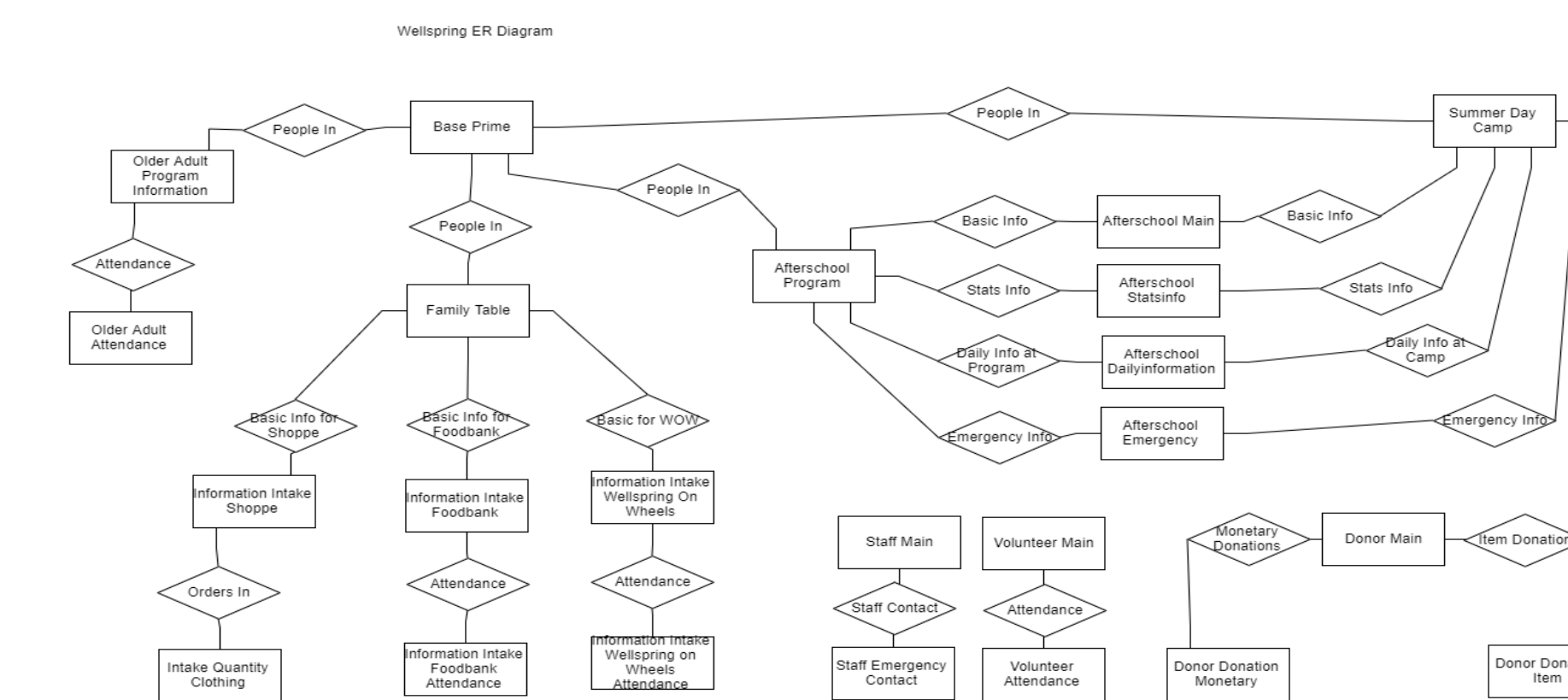


Figure 1: Wellspring's Database ER Diagram

FINAL DESIGN

The final design of the Wellspring Database, followed the initial design concept presented in the ER Diagram in the Design Concept Section. While following the ER Diagram, the database was implemented using Microsoft Access and then placed into a GUI. This GUI allows the users to more easily navigate, enter data and view reports in the database.

Along with implementing a GUI into the database, the database also has the following features.

- Multiple sections for data entry for each program.
- Multiple built in queries that are available for the users to easily query the database
- Added buttons for easy navigation of the GUI
- Split database on a network, to allow for multiple users to be using the database at one time

FUTURE WORK

Currently the database is in its 4th version. Along with delivering the final project to Wellspring. The following tasks must be completed, before completion of the project

- Make tutorial videos for the Wellspring employees.

CONCLUSION

In conclusion, the Wellspring database project was a challenging and unique project. One that tested the level of designs of basic database design, to fitting the need and wants of the customers

LESSONS LEARNED

Over the duration of developing this project the following lessons were learned

- Learned in great detail how to design a database.
- Learned the importance of compromising database design, with normalization of the database
- Learned the importance of discussing with the client the purpose of the project.
- Learned the important of teaching the client about the system, before completing the project.

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