MUSAC: CRIME System Redesign and Redevelopment Project

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BICT (Applied) Industry Project

This project was undertaken by Jianjun Deng. Three major tasks required completion for the MUSAC (Massey University School Administration by Computer) CRIME project:

1. Systems Analysis – producing high level and detailed design documentations

2. Design and development of a new database using Microsoft SQL Server 2000

3. Design and development of an application using Microsoft Visual Studio C#.NET

The first phase consisted of analysing the existing application and database. The high level and detailed design documentation contained diagrams to recommend improvements to the existing system. These diagrams were created using an object–oriented notation, the Unified Modelling Language (UML). The recommendations made included:

- Redesign a database that provides more robust performance using MS SQL Server 2000

- Redesign the application to provide a more flexible User Interface (UI) using MS Visual Studio

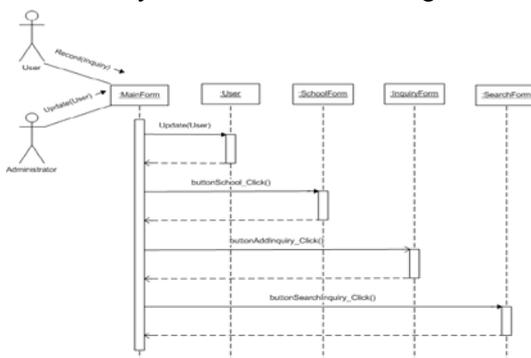- Using a docking window and tab control as the mainstay in the main form UI design
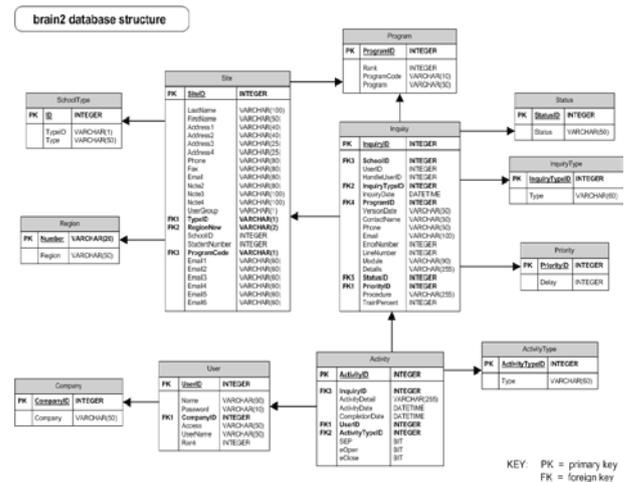

Figure 1. Use Case

Figure 2. Database Structure

Based on this analysis, and feedback from users, a new database was developed in SQL Server. The new database has a highly integrated data structure after normalization of the existing database was undertaken.

Finally the application was developed using Rapid Application Development (RAD) methodology. This involves an evolutionary prototyping approach to development and implementation of the final solution.
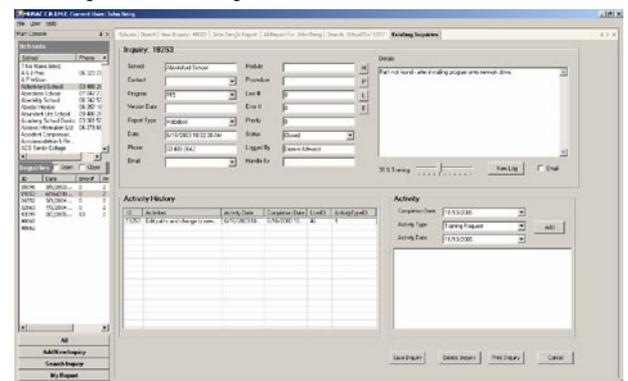

Figure 3. CRIME Application

The project concluded with the testing of the application and development of the training and maintenance resources for the project sponsor.