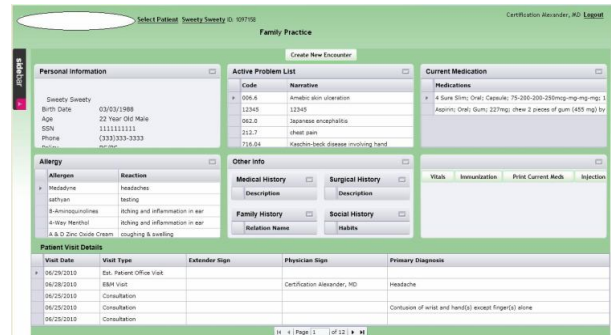# EMR Dashboard

A Silverlight solution

Executive Summary

An EMR which is a health information system is something which professionals in healthcare industry look for. The importance of an EMR is very well understood by them. But, the foremost thing which an EMR would require for its success is an impressive dashboard.

When the client wanted an easy to use, fast, flexible dashboard, Mindfire could very well understand the intricacies of the existing dashboard. After analyzing on the requirements of the client, and researching on their existing dashboard, Mindfire could very well understand that the technologies used were outdated with the major issues occurring due to the legacy technologies used. After having the requirement analysis approved by the client, Mindfire started the development work and emerged with a n-tier Silverlight dashboard that eradicated all the worries of the client.

About our Client

Client   *A leader in Electronic Medical Records* | **Location**   *KS, USA* | **Industry**   *HealthCare IT*

Business Situation

Anyone in the healthcare IT industry knows that a dashboard plays a very vital role in the success of an EMR. The dashboard that was being used was prone to errors, was bulky and had performance issues and also was not easily customizable. The technologies used were outdated and the legacy technologies were the main culprits behind the issues that were encountered on a day to day basis.

An easy to use, fast, flexible dashboard was the need of the hour and the client approached us with this request. Mindfire analyzed the current system and got the requirement analysis approved. We also listed out the expected performance characteristics and listed the goals in terms of usability and flexibility.

Solution Details

The Mindfire Solution

The solution was developed mainly with Silverlight and we implemented a very robust, flexible and very rich looking user interface. The solution was designed in such a way that any given point the users would be able to get to the dashboard and get a quick view of the patient's personal info, Active problem List, Vitals with graphs, Current Medication, Allergies, Histories and other very important details were shown as a gist enabling the end user to get a complete and at the same time quick summary of the patient's current status.

The application as designed with N-Tier architecture with Silverlight being the presentation tier, WCF for the service tier and we also had Business and Data tiers. Microsoft Entity Framework was used for Data Access. The solution was developed within a very short span of time and delivered.
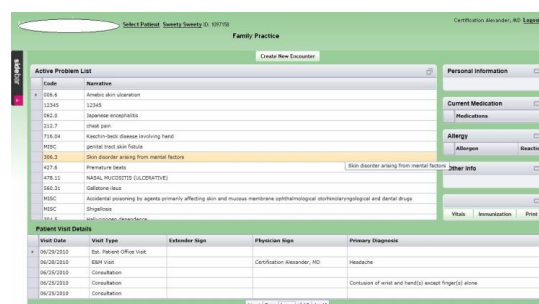
Achievements

We built a Silverlight dashboard that eliminated all the issues with the legacy one. The application was built in a N-Tier architecture so that n number of presentation clients can be easily built without reinventing the wheel. For example, if there is a need to build a native iPhone Application, the service layer, the business layer and data layer can be just re-used. The end users were extremely pleased with the performance and the ease with which they could access important information of the patient.

Technologies

Silverlight 4.0, WCF 4.0, Entity Framework 4.0, C# 4.0, SQL Server 2008 R2.

Final Results

Software System

Customer Benefits

The customer had a state of the art application which was built using the lasts and the best technologies for the job. The reliability issues associated with the legacy application were history and the end users had access to patient's dashboard in a snap of a finger. The customer was able to increase the sales of the application and also was able to retain many of the customers who would have quit otherwise. The legacy application used to have around 30 – 40 issues reported in a working day through support calls and with the new application, the errors were reduced to Zero. The page load time was improved a staggering 220 times as seen by SQL and web page traces.

Future relationship

Being very much pleased with our approach and work efficiency, the client has rewarded us with a new project related to healthcare systems with increasing the workforce this time.