

UMR Project

TEAM A

Overview

- Motivation
- Requirements
- Design
- Functionality

Motivation

Increasing amount of ...

- Potential patients
- Patient mobility
- Required storage
- Required reliability



Motivation

Obstacles

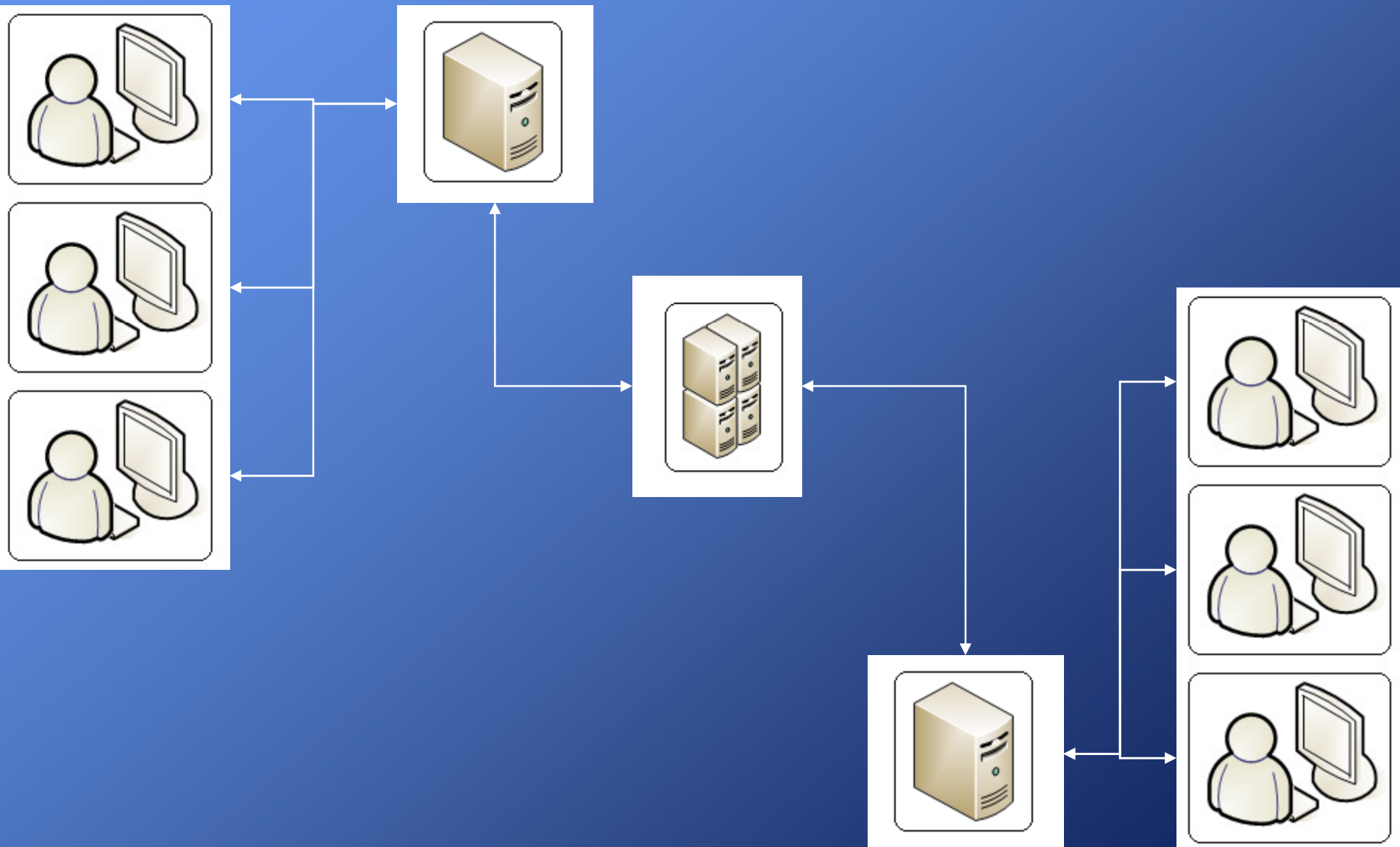
- Response time
- Security
- Accessibility
- Reliable storage



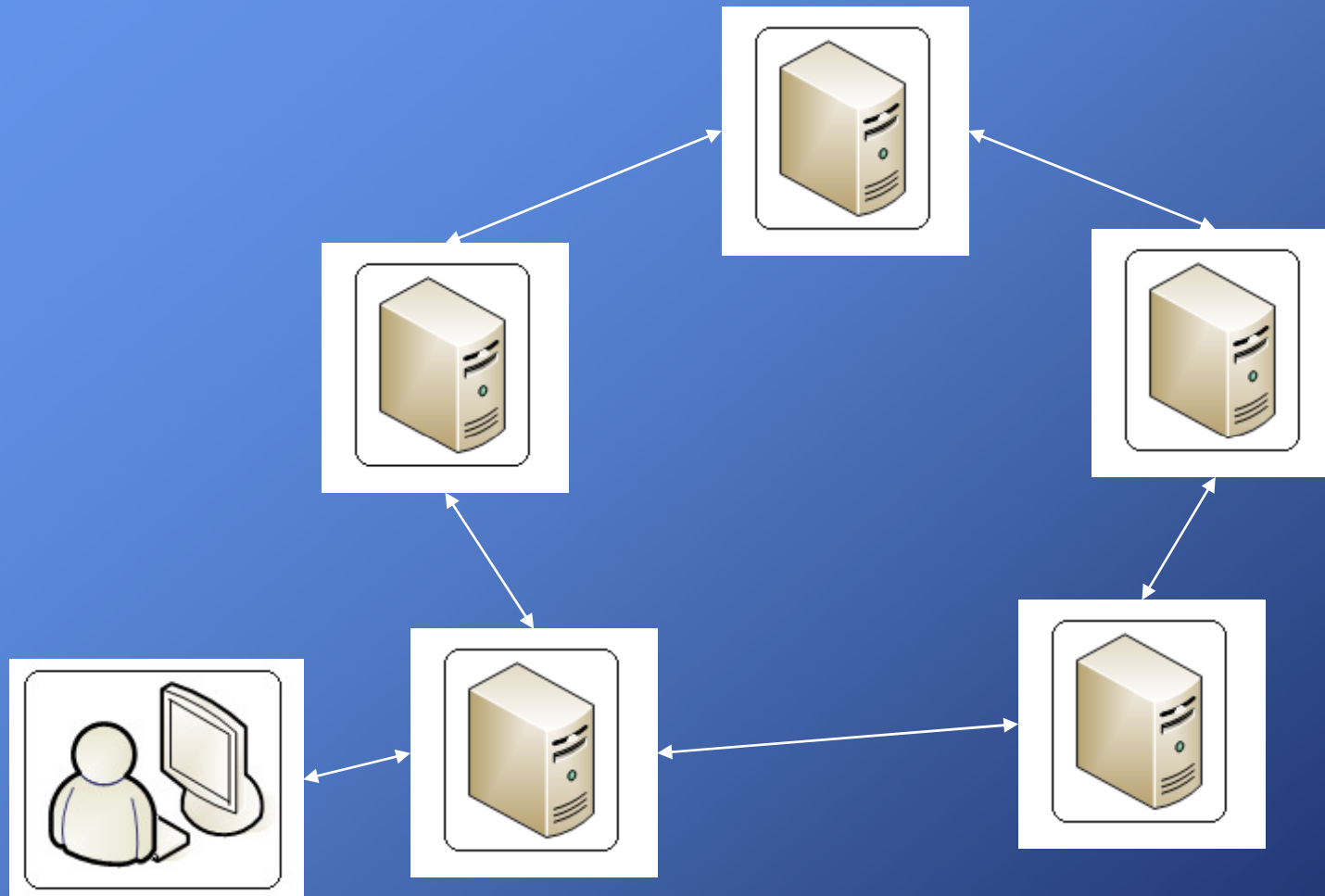
Project Description

- The goal of this project is to develop a set of systems that simulate a regional Electronic Health Record.
- Local systems represent different vendor systems in diverse health care venues.
- Regional system represents a system that can deliver a consolidated set of data from the contributing local systems.

Project Description



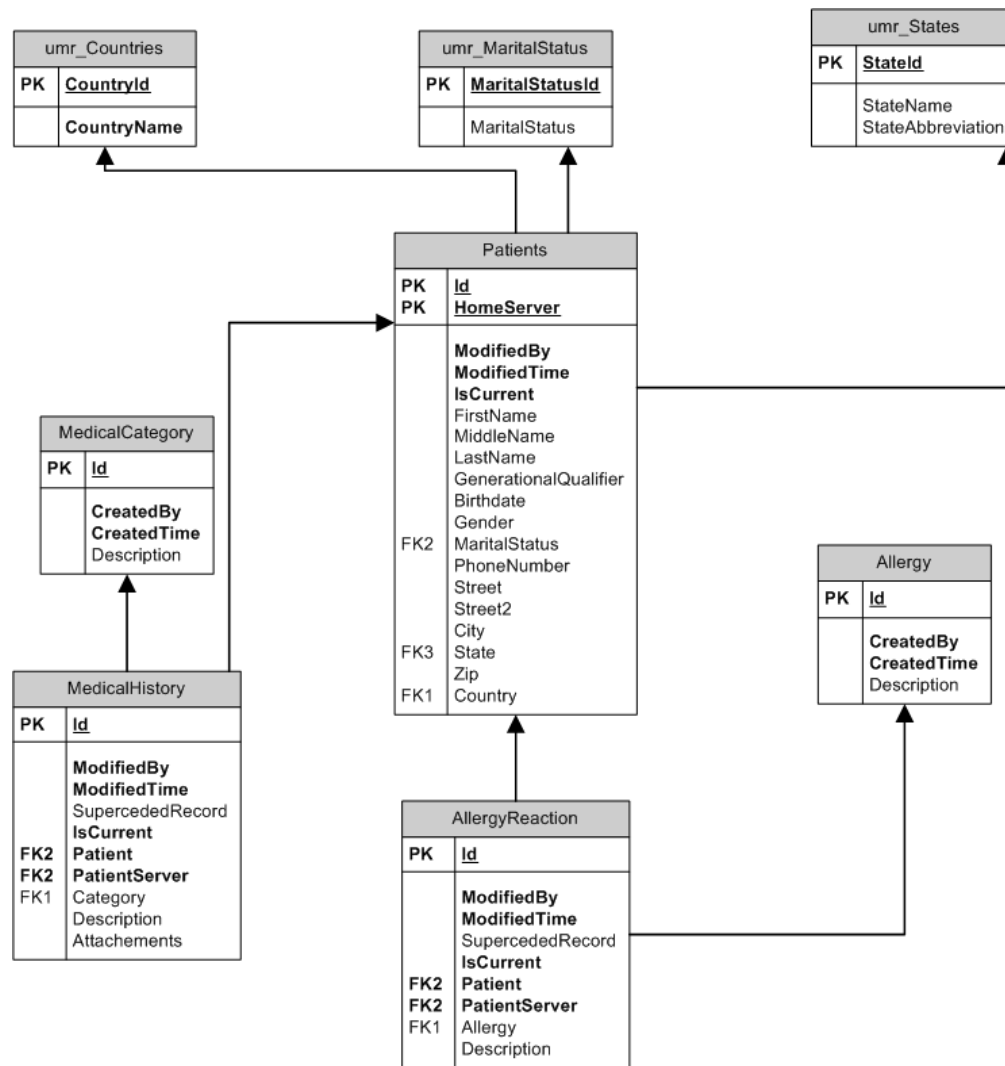
Project Design



Functional Requirements

- System allows access to only registered users
- System supports user identification
- System supports ability to add, display, modify, and delete a patient's demographic, allergy, and medical history information.

Functional Requirements



Unfulfilled Requirements

- Near perfect reliability
- System reacts quickly with minimal loss of data
- Use cases to simulate nearly every conceivable situation

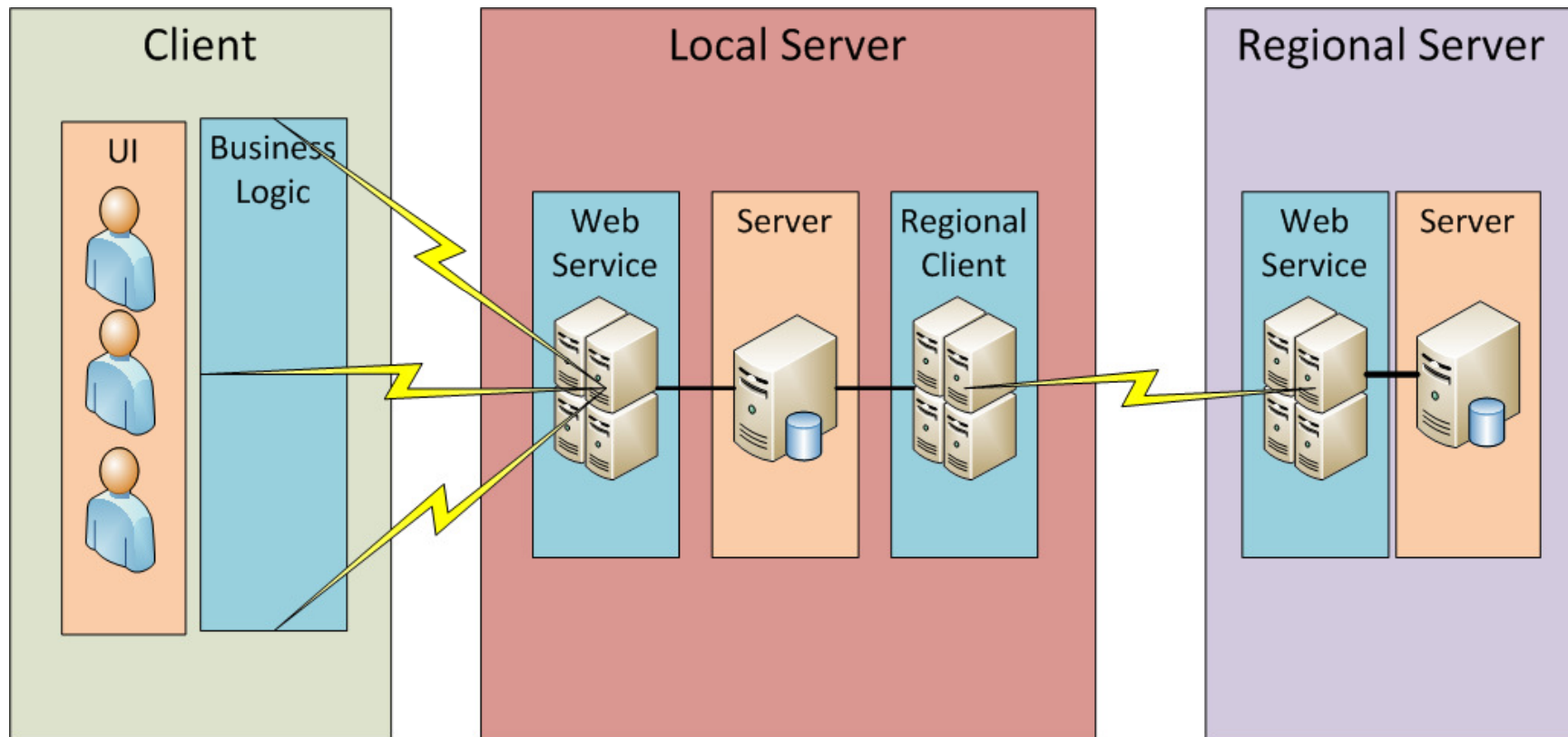


Technology

- ASP.NET Web Services
- SQL Server
- C# WinForms
- NUnit and MSBuild
- WIX
- Windows Server 2003
- Windows SharePoint Services

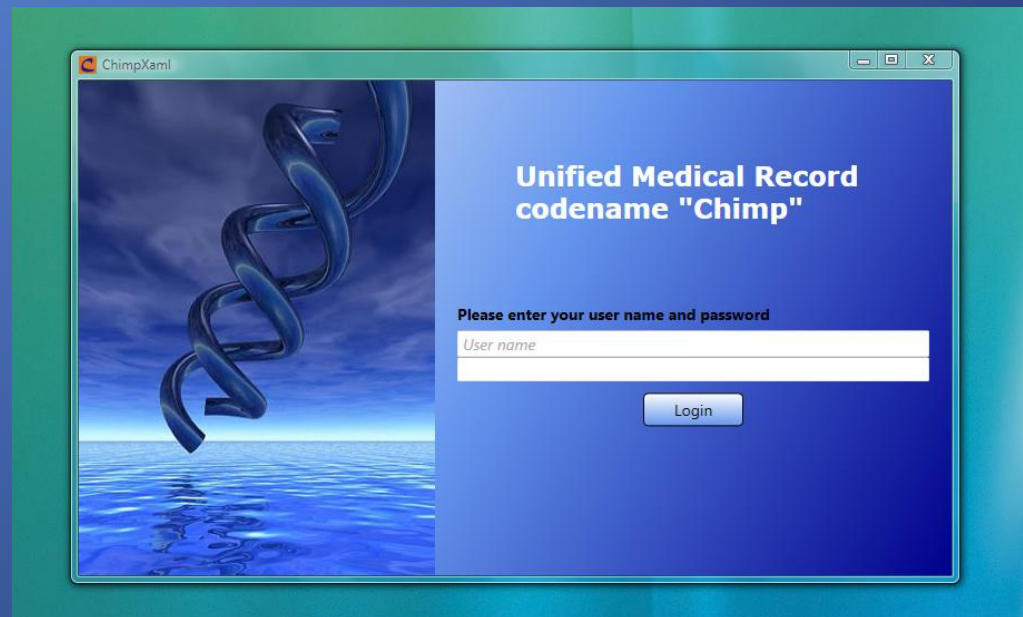


High Level Design



Design

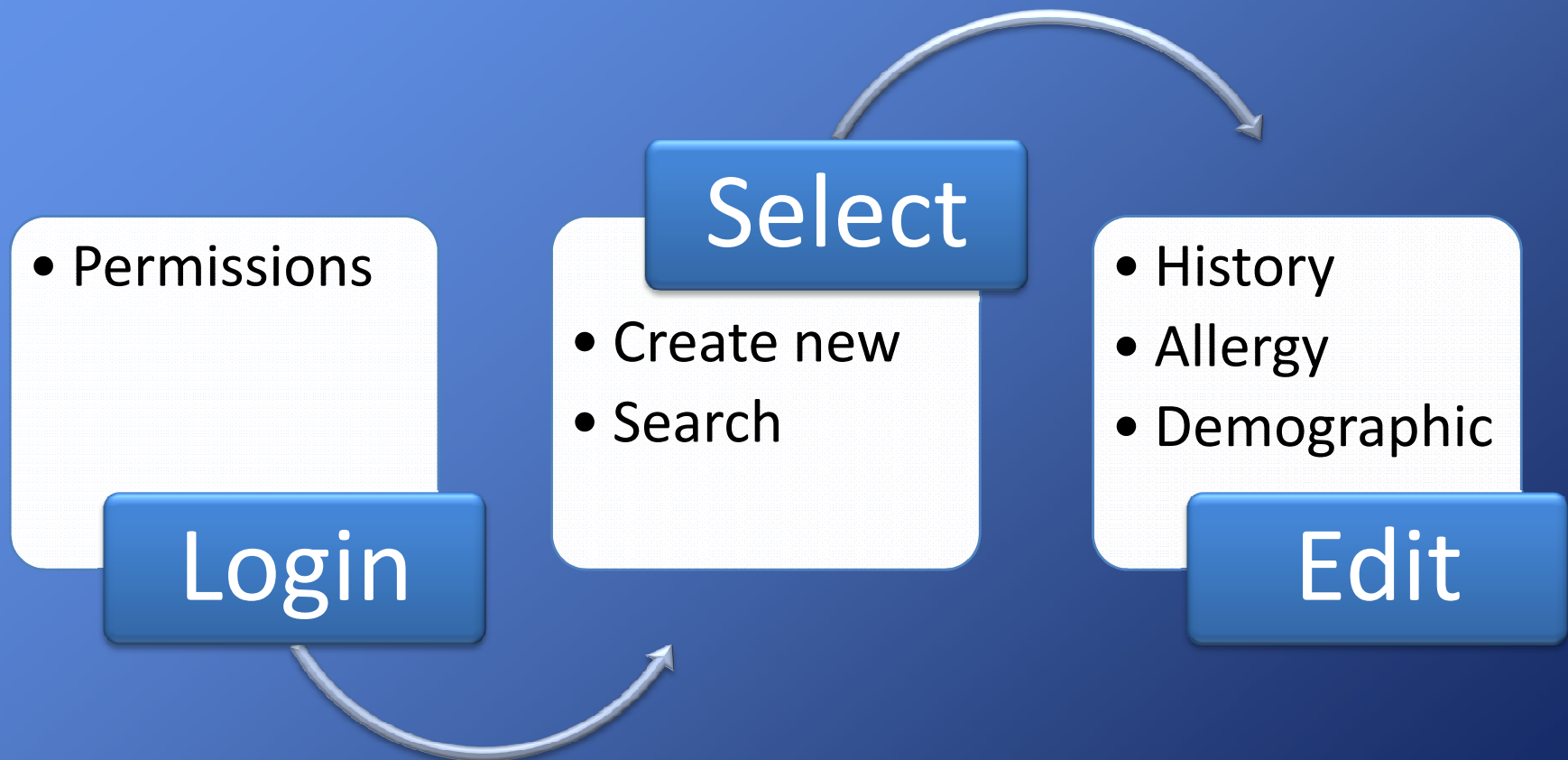
- Challenges
 - Regional & local communication
 - GUI principles
- Future Enhancements?



Functionality

- Client
 - Create new patients
 - View/edit demographics on existing patients
 - View/edit patient medical history and allergies
- Local Server
 - Secured communication
 - Extensive auditing and traceability
- NO Regional Server

Client Overview



Allergy View

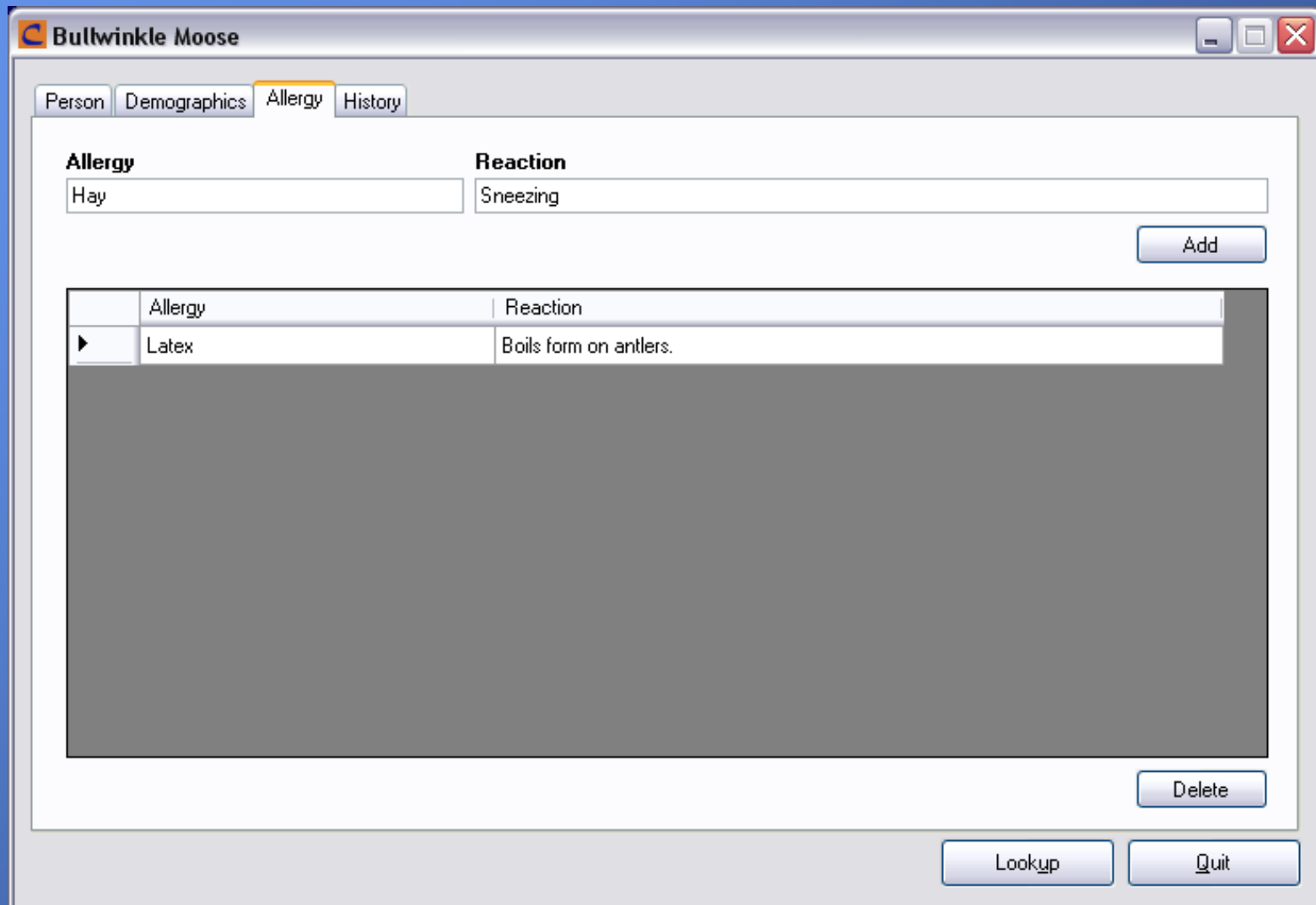
The screenshot shows a software window titled "Bullwinkle Moose" with a standard Mac OS X-style title bar (minimize, maximize, close buttons). Inside the window, there are four tabs: "Person", "Demographics", "Allergy" (which is selected and highlighted with an orange border), and "History".

Below the tabs, the "Allergy" section contains two input fields labeled "Allergy" and "Reaction". To the right of these fields is an "Add" button. Below the input fields is a table with two columns: "Allergy" and "Reaction". The table has one data row with the values "Latex" and "Boils form on antlers." respectively. A small right-pointing arrow is visible in the first column of the table header.

Below the table is a large, empty gray rectangular area. At the bottom right of the table area is a "Delete" button. At the very bottom of the window are two buttons: "Lookup" and "Quit".

Allergy	Reaction
Latex	Boils form on antlers.

Adding an Allergy



The screenshot shows a window titled "Bullwinkle Moose" with a standard Windows-style title bar. Inside the window, there are four tabs: "Person", "Demographics", "Allergy", and "History". The "Allergy" tab is currently selected and highlighted. Below the tabs, there are two input fields. The first is labeled "Allergy" and contains the text "Hay". The second is labeled "Reaction" and contains the text "Sneezing". To the right of these fields is an "Add" button. Below the input fields is a table with two columns: "Allergy" and "Reaction". The table has one row of data: "Latex" under the "Allergy" column and "Boils form on antlers." under the "Reaction" column. Below the table is a large gray rectangular area. At the bottom right of the window, there are three buttons: "Delete", "Lookup", and "Quit".

Bullwinkle Moose

Person Demographics **Allergy** History

Allergy **Reaction**

Hay Sneezing

Add

Allergy	Reaction
▶ Latex	Boils form on antlers.

Delete

Lookup Quit

Allergy Added

Bullwinkle Moose

Person Demographics **Allergy** History

Allergy Hay **Reaction** Sneezing

Add

	Allergy	Reaction
▶	Latex	Boils form on antlers.
	Hay	Sneezing

Delete

Lookup Quit

Duplicate Checking

The screenshot shows a window titled "Bullwinkle Moose" with a tabbed interface. The "Allergy" tab is selected. At the top, there are two input fields: "Allergy" containing "Hay" and "Reaction" containing "Sneezing". To the right of these fields is an "Add" button. Below the input fields is a table with two columns: "Allergy" and "Reaction". The table contains two rows: one with "Latex" and "Boils form on antlers.", and another with "Hay" and "Sneezing". At the bottom right of the table area is a "Delete" button. At the very bottom of the window are "Lookup" and "Quit" buttons. A modal dialog box is centered on the screen, displaying the message "It can't be added. The allergy and reaction exist" and an "OK" button.

Bullwinkle Moose

Person Demographics **Allergy** History

Allergy Hay **Reaction** Sneezing

Add

	Allergy	Reaction
▶	Latex	Boils form on antlers.
	Hay	Sneezing

It can't be added. The allergy and reaction exist

OK

Delete

Lookup Quit

Are you sure?

The screenshot shows a software application window titled "Bullwinkle Moose". It has four tabs: "Person", "Demographics", "Allergy", and "History". The "Allergy" tab is selected. Inside the window, there are two input fields: "Allergy" with the text "Hay" and "Reaction" with the text "Rash". To the right of these fields is an "Add" button. Below the input fields is a table with two columns: "Allergy" and "Reaction".

	Allergy	Reaction
▶	Latex	Boils form on antlers.
	Hay	Sneezing

Below the table, a modal dialog box is displayed. The dialog box is titled "Bullwinkle Moose" and contains the text: "An allergy with the provided name already exists. Are you sure you want to add another?". There are two buttons in the dialog: "Yes" and "No".


At the bottom right of the main window, there are two buttons: "Delete" and "Lookup".

Allergy Added

Bullwinkle Moose

Person Demographics **Allergy** History

Allergy **Reaction**

	Allergy	Reaction
	Latex	Boils form on antlers.
	Hay	Sneezing
	Hay	Rash


Editing

Bullwinkle Moose

Person Demographics **Allergy** History

Allergy Hay **Reaction** Rash

Add

	Allergy	Reaction
	Latex	Boils form on antlers.
	Hay	Sneezing
	Hay	Rash on back

Information saved. (Rash on back)

OK

Delete

Lookup Quit

Deleting

Bullwinkle Moose

Person Demographics **Allergy** History

Allergy **Reaction**

	Allergy	Reaction
	Latex	Boils form on antlers.
▶	Hay	Sneezing
	Hay	Rash on back

Are you sure you want to delete 1 row(s)?

It works!

The screenshot shows a window titled "Bullwinkle Moose" with a standard Mac OS X-style title bar (minimize, maximize, close buttons). Inside the window, there are four tabs: "Person", "Demographics", "Allergy" (which is selected and highlighted with an orange border), and "History".

Below the tabs, the "Allergy" section contains two input fields labeled "Allergy" and "Reaction". To the right of these fields is an "Add" button. Below the input fields is a table with two columns: "Allergy" and "Reaction".

Allergy	Reaction
Latex	Boils form on antlers.
Hay	Rash on back

Below the table is a large grey rectangular area, likely a placeholder for more data or a scrollable list. At the bottom right of the table area is a "Delete" button. At the very bottom of the window are two buttons: "Lookup" and "Quit".

Enhancements

- Implement medical billing system
- Add an electronic insurance eligibility verification
- Add computerizing financial management
- Implement “Help” button at the top of any screen
- Display high-end graphic features
- Add sound an application
- Add a password-protected screen saver
- Implement the patient scheduling system
- Add a computerized voice dictation system

Summary

- Motivation
- Requirements
- Design
- Functionality
- Questions?