Business Requirements

YMCA Child Watch Web Application

A system to monitor and report activities of children at the YMCA.

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Overview

Current Business Process

The YMCA has implemented a child watch program where parents can bring younger children for YMCA staff members to watch while they use the facilities. The goal of this is to bring in more people to the company knowing they have child watch options. To use this service, members must manually write down contact information, child name, and sign in information when coming in. From here, the parent and child are both given bands with matching numbers. Once sign in is complete, parents are free to use the YMCA facilities and their child goes to one of two play zones. Parent and child are checked prior to leaving to ensure both band numbers match. Currently all reporting, logging, and sign in/out is done manually and records are kept on paper.

Deficiencies in Current Process

With everything manual and on paper, it is difficult to keep accurate data. Members can be rushed and forget to fill in information. Also, there is nothing other than a sheet of paper to track sign in status. This makes it difficult to monitor the number of children while they are in the facility. Management must go through these sheets to build reports and analyze the process to make changes to points of concern.

Proposed Business Process

We will build a multi user system to handle tracking data and creating reports for the YMCA child watch program. The system will be entirely web based, operating in the cloud and user interfaces being web links. Data will instead be kept in a singular database that links the current member information to their check in information. The system will incorporate business intelligence to provide reports and data analytics to management to easily make decisions based on program usage. Information will be stored securely and travel through encrypted channels to each piece of the system.

Solutions to Existing Deficiencies

By removing anything manual, we can guarantee data integrity by the constraints set by the business rules. This will ensure that data remains consistent and accurate always. Members will be able to sign in faster once they have registered for the program. A computer will be available to members upon arrival to type in a custom pin to sign in themselves and their child. The decrease in sign in and sign out time will increase member acceptance and approval of the program.

Project Stakeholders

The following section describes the stakeholders in the project and his/her role.

Consumer

1. Bethany Williard – Membership Coordinator
    a. Primary contact for the project at the YMCA
    b. Approve final deployment of product

Development Team

1. Christian Ore – Project Manager
    a. Review designs and implementation.
    b. Provide updates to management.
    c. Liaison to the YMCA for project requirements.
    d. Develop backend database and web services

2. Kayla Sparklin – Database & BI Development
    a. Develop database structure and implementation
    b. Create procedures for use within project
    c. Create and support Business Intelligence for project requirements

3. Coleman Wilson – Front End Development
    a. Responsible for building the sign in portion of the web application
    b. Create a method for logging

4. Jeremey Adams – Application Development
    a. Creating a subsystem to register and sign out members
    b. Integrate SignalR push notifications to keep content up to date

Requirements

Functional Requirements

1. Sign in/ Sign out
    a. Members will have a dedicated view where they can sign in to child watch.
    b. Sign in requires the YMCA barcode and a unique PIN created by the member.
    c. Staff will have a view to check band numbers and sign out a member.
    d. Once signed in, a unique six-digit code is provided to the member to write on their bands.
    e. Members should be able to sign in multiple children and choose corresponding locations.
2. Registration
    a. Staff can add new members using a dedicated view. This view will take member data and their unique YMCA member id to match to the existing YMCA database.
    b. Once registered, members can sign in on their own.
3. Update
    a. A page should allow querying of existing member data to change any field, accept for the pin, this is changed by the member only.
    b. A page should allow updating child information.
    c. A form should allow a comma separated file to be attached to update member active status. The file will have the YMCA member id and a Boolean value indicating active membership.
4. Administration

    Administrators should be able to complete the following:

    a. Add a new administrator to the system
    b. Pull and print reports
    c. Override sensitive data (i.e. PIN and other member data)
5. Password Recovery
    a. Have system to update passwords should an admin forget their password

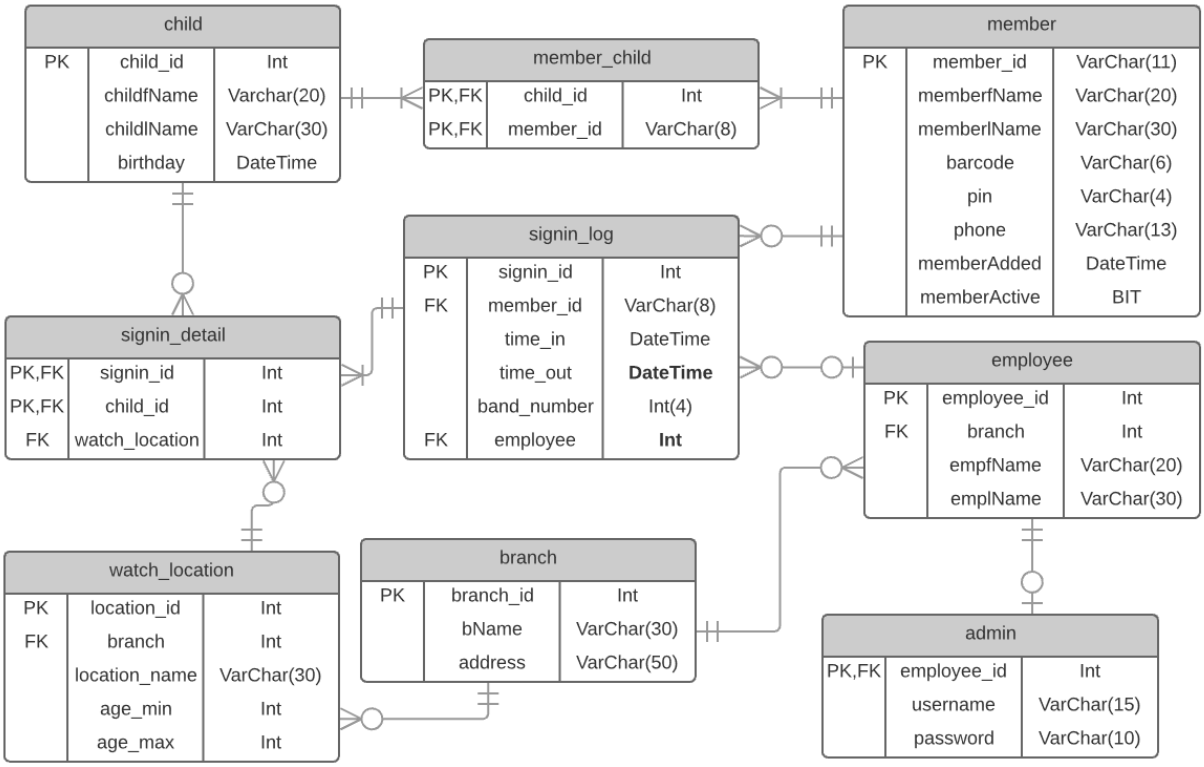
Reporting

The YMCA child watch system should be able to generate the following reports in its business intelligence system for the user.

1. Head Count
    a. This report will show the count of children in the program partitioned by time increments.
2. Total Enrollment
    a. One version of this report will show all members in the program.
    b. A second version will show all children active in this program.

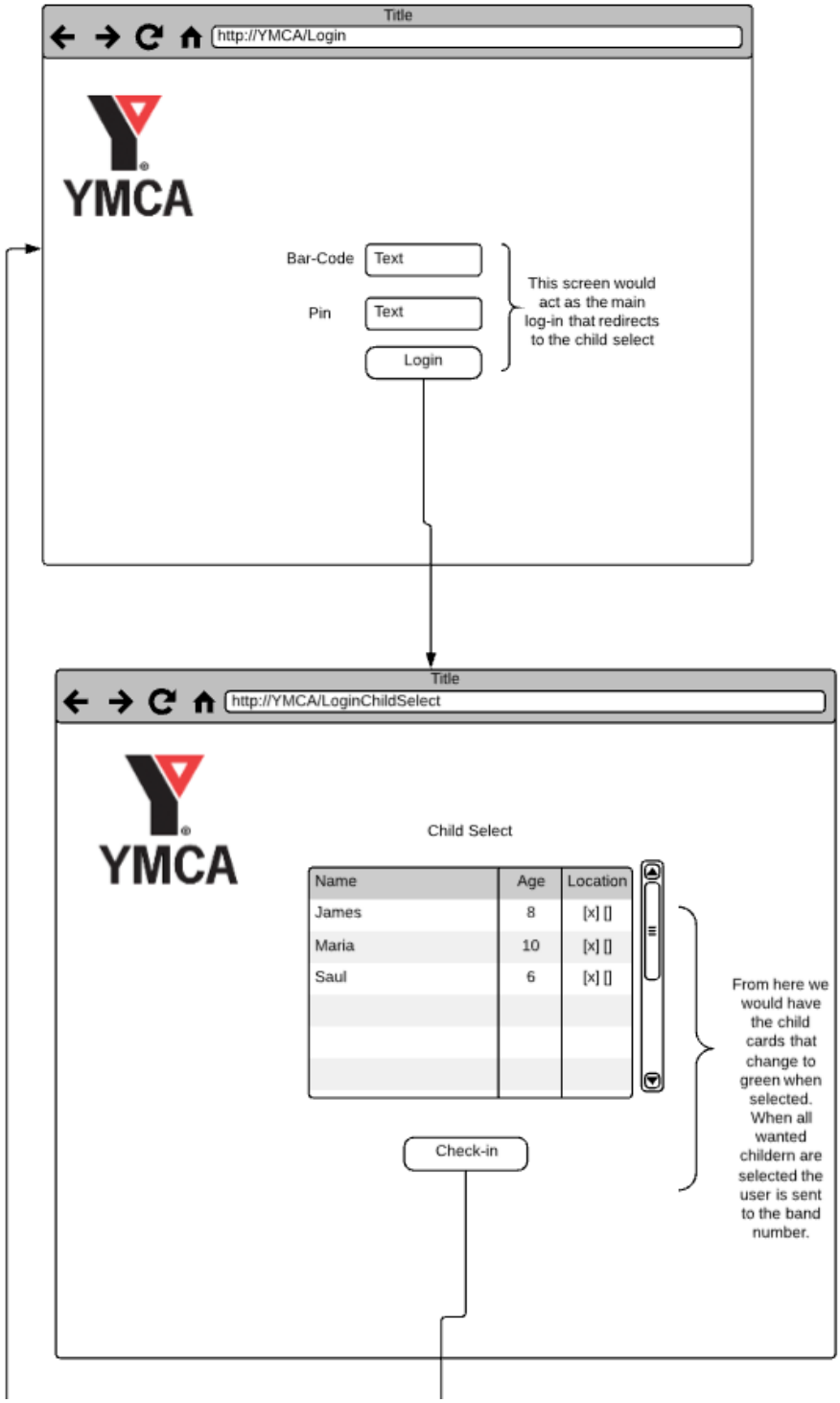
3. Current Sign in
    a. This report should show members and children currently signed into program.
    b. Report should update as members enter and exit for the day.
4. Check in/out history
    a. Show sign in records filtered by user search parameters

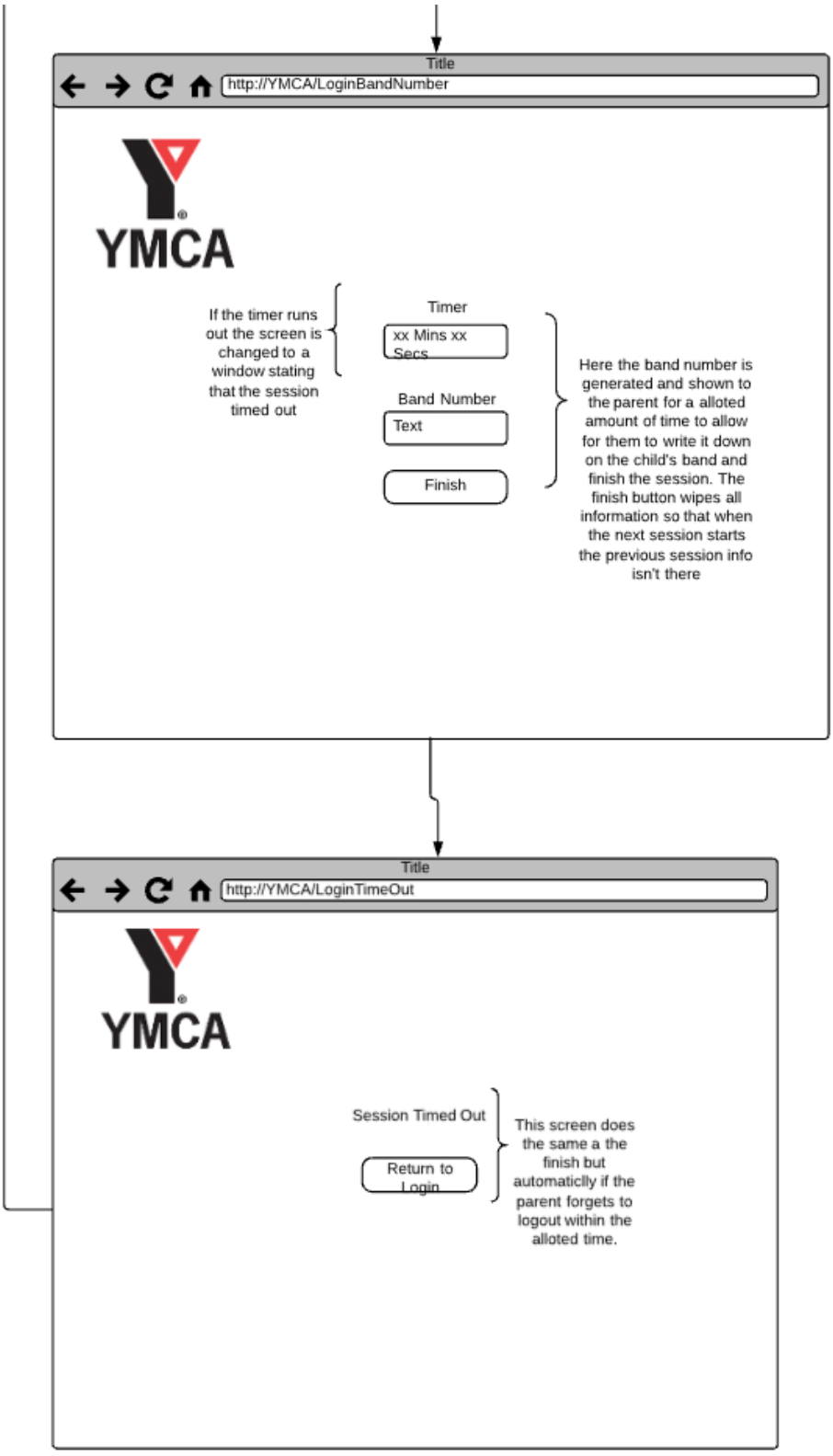
Data



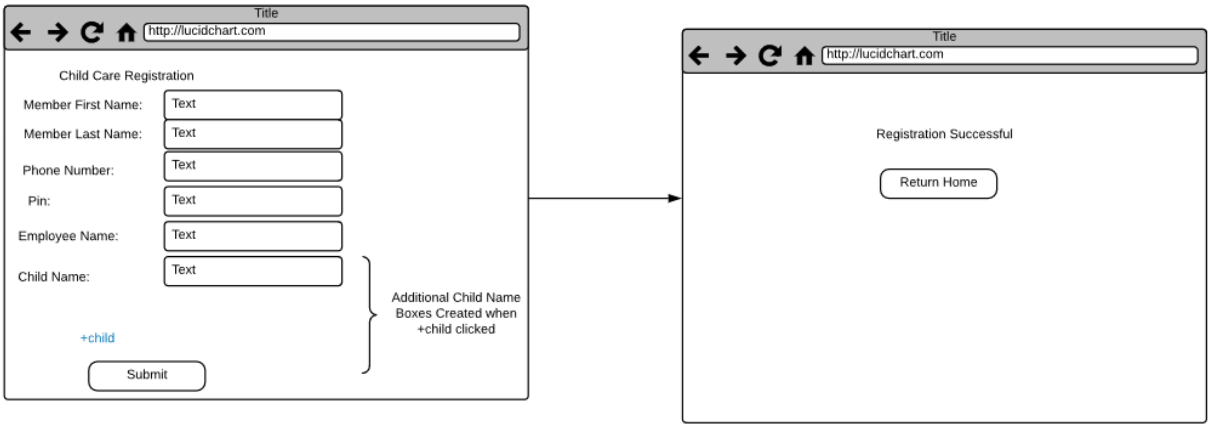
User Interface

Login Process

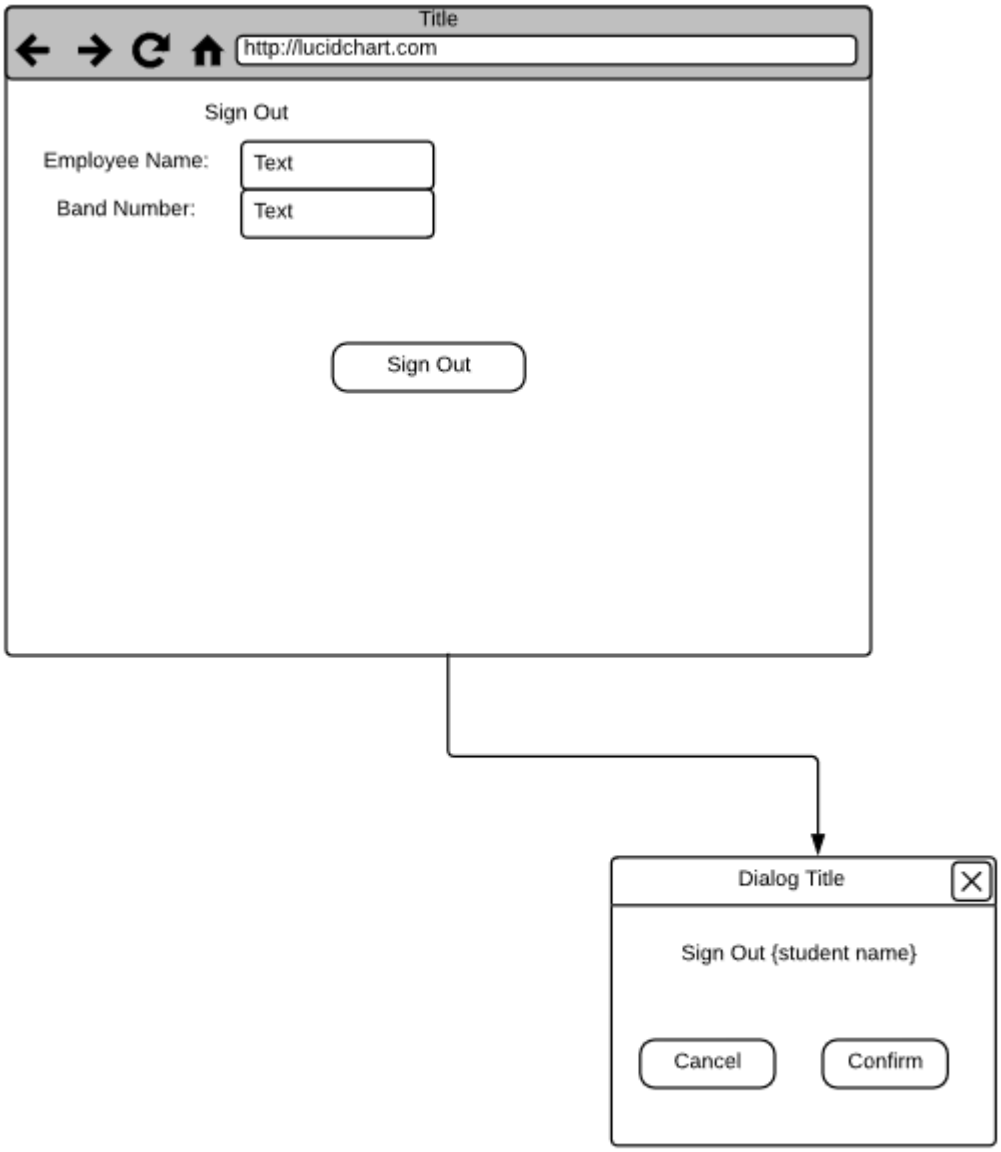



Title
http://YMCA/LoginBandNumber
YMCA
If the timer runs out the screen is changed to a window stating that the session timed out
Timer
xx Mins xx Secs
Band Number
Text
Finish
Here the band number is generated and shown to the parent for a alloted amount of time to allow for them to write it down on the child's band and finish the session. The finish button wipes all information so that when the next session starts the previous session info isn't there
Title
http://YMCA/LoginTimeOut
YMCA
Session Timed Out
Return to Login
This screen does the same a the finish but automaticlly if the parent forgets to logout within the alloted time.

Registration



Sign Out


Title
http://lucidchart.com
Sign Out
Employee Name:
Text
Band Number:
Text
Sign Out
Dialog Title
Sign Out {student name}
Cancel
Confirm

Cost of Development

Section	Rate	Amount	Total
Labor	$22/hr.	160 hours	$3520.00
Database Service	$5/month	4 months	$20.00
Web Application Hosting	$11/month	4 months	$44.00
Estimated Total			$3584.00

Project Timeline

Date	Event	Description
3/1/2018	Project Design	Create working design and analyze system.
3/7/2018	Implementation	Begin building of system
4/20/2018	Anticipated Project Completion	Project should be complete or wrapping up development
4/25/2018	Quality Assurance	Complete testing and patches to bugs
4/30/2018	Final Deployment	Deliver project to YMCA

Considerations

1. The YMCA is a non-profit and does not have a major budget to implement this system. Even with the donation of development time, the project will need to keep resources used by the system such as hardware, hosting, DNS and other necessities to a minimum. We will modify the build to accommodate current hardware and resources the local YMCAs already have on site to prevent buying additional items or software.
2. To ensure deployment has no difficulty, the project will need to complete implementation by April 20th, 2017 to ensure enough time for testing and driving to the Greensboro site to install and to train the staff.
3. Once the system is deployed, there will be little support from the development team and will become a released and unmaintained product. The quality of the software will need to be as high as possible to ensure this product can operate without technical support or future patches.
4. The system will run in a web environment using a hosted web service. The system will need a way to ensure only authorized computers can connect to get sensitive information. In addition, any moving data will need to be encrypted as it flows from the server to the client.