Fall 2016

Sales Management Portal

Peter Ilori
Governors State University

Follow this and additional works at: http://opus.govst.edu/capstones
Part of the Computer Sciences Commons

Recommended Citation
http://opus.govst.edu/capstones/275

For more information about the academic degree, extended learning, and certificate programs of Governors State University, go to http://www.govst.edu/Academics/Degree_Programs_and_Certifications/

Visit the Governors State Computer Science Department
This Project Summary is brought to you for free and open access by the Student Capstone Projects at OPUS Open Portal to University Scholarship. It has been accepted for inclusion in All Capstone Projects by an authorized administrator of OPUS Open Portal to University Scholarship. For more information, please contact opus@govst.edu.
SALES MANAGEMENT PORTAL

By

Peter Ilori
Bachelors of Science Chicago State University, 2011

GRADUATE CAPSTONE PROJECT

Submitted in partial fulfillment of the requirements

For the Degree of Master of Science,

With a Major in Computer Science

Governors State University
University Park, IL 60484

2016
ABSTRACT

The main idea of this project is to develop a portal for an Insurance Company called Image Insurance. In this project we develop a user friendly website for the clients and an easy accessible database for the employees. The employees will register the clients, they will have the ease of access to add, delete and modify the client status. The database will be more secured where the administrators can only access the employee functions.

The portal will have a home page, contact details of company, client sign in and login. The motive of this project is to increase the time efficiency in the customer service through giving access to an employee into complete client details. By developing a more user friendly interface portal, an employee/customer will have the ability to perform multiple tasks in a more time efficient and easier manner.
Table of Content

1 Project Description ................................................................................................................................................................. 4
   1.1 Competitive Information ......................................................................................................................................................... 4
   1.2 Relationship to Other Applications/Projects......................................................................................................................... 4
   1.3 Assumptions and Dependencies .............................................................................................................................................. 4
   1.4 Future Enhancements.............................................................................................................................................................. 4
   1.5 Definitions and Acronyms .................................................................................................................................................... 5

2 Technical Description .............................................................................................................................................................. 5
   2.1 Application Architecture ........................................................................................................................................................... 5
   2.2 Application Information Flows.............................................................................................................................................. 8
   2.3 Interactions with other Projects (if Any) .................................................................................................................................. 9
   2.4 Interactions with other Applications...................................................................................................................................... 9
   2.5 Capabilities ........................................................................................................................................................................... 9
   2.6 Risk Assessment and Management......................................................................................................................................... 9

3 Project Requirements ............................................................................................................................................................... 9
   3.1 Identification of Requirements ........................................................................................................................................... 9
   3.2 Operations, Administration, Maintenance and Provisioning (OAM&P) ............................................................................. 16
   3.3 Security and Fraud Prevention.............................................................................................................................................. 16
   3.4 Release and Transition Plan.................................................................................................................................................. 16

4 Project Design Description ........................................................................................................................................................... 10

5 Internal/external Interface Impacts and Specification ........................................................................................................... 11

6 Design Units Impacts ................................................................................................................................................................. 11
   6.1 Design Screenshots................................................................................................................................................................. 14

7 Data ............................................................................................................................................................................................ 17

8 Acknowledgements ................................................................................................................................................................. 20

9 References .................................................................................................................................................................................. 20
1 Project Description

The purpose for this project is to design a friendlier/more compatible user interface website portal, that will allow our insurance company’s employees and customers to have easier access to general information regarding accounts. By developing a more user friendly interface portal, an employee/customer will have the ability to perform multiple tasks in a more time efficient and easier manner.

1.1 Competitive Information

As many are aware, the automobile insurance industry is very competitive, due to a large amount of other companies out there. Apart from dependable coverage, prospective customers are seeking great customer service when they are in a time of need due to an unfortunate situation. Generally, when a customer calls into our competitors call centers, they are transferred to several departments before they can get ahold of the appropriate representative that can attend to their particular need. During this process, customers are placed on long hold times and sometimes experience accidental terminated calls. By developing and implementing our new website portal, when a customer calls into IMAGE Auto Insurance, the first representative the speak to will be capable of attending to that customers need. This makes the employee more content at work, with being capable of satisfying the customers need, and the customer will be content with solving their issue in a quicker time. This portal, in result, will increase productivity, increase time efficiency, and produce client growth.

1.2 Relationship to Other Applications/Projects

To our knowledge, there are no other companies within the U.S. that our currently implementing our application. We have conducted research by placing several test calls to local competitors, which include Allstate, Farmers Insurance, State Farm, Progressive Auto Insurance, Esurance, Geico, Liberty Mutual, and Nationwide. In performing test calls to the following companies on the different dates along with different time frames, we experienced being transferred to different departments, talking to an automated system, accidental terminated calls, and long hold times. Employees seem to lack access to assist users with multiple needs, or have access to certain information to assist the customer.

1.3 Assumptions and Dependencies

We assume that by implementing this portal, our number of customers will grow, we will have the ability to be more time efficient as a company, and we will be more profitable.

We used Microsoft Access as our database to provide users with information needed to be assist any customer, and to implement functions. We depended heavily on our C+ code to implement a more user friendly portal to allow customers and employees to perform tasks simpler.

1.4 Future Enhancements
Future enhancements for our sales portal include a mobile application to provide convenience to customers that need to access details regarding their account. We will integrate our database into the app and are currently working to make it compatible for both IOS users along as Android.

1.5 Definitions and Acronyms

C++ - programming language
ECC - Error Correcting Code
GUI - graphical user interface
HTTP - Hypertext Transfer Protocol
HTML - Hypertext Markup Language
UI - user interface
WAN - Wide Area Network

2 Project Technical Description

Our project consists of a newly designed sales portal application that will be used by both employees, customers, and prospective customers. For employees, it will allow them to access more data, which will give them the ability to assist and solve conflicts for users who normally would be transferred to a different department. For customers/prospective customers, they can access our general portal that will be more user friendly, which we implemented with C++, and will a more simplified GUI.

2.1 Application Architecture
# Image Insurance

## Customer Information

<table>
<thead>
<tr>
<th>Client ID</th>
<th>Last Name</th>
<th>First Name</th>
<th>Client Status</th>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Address</th>
<th>Apt No</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
<th>Phone Number</th>
<th>Marital Status</th>
<th>Source</th>
<th>Source Name</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date of Birth</th>
<th>Email</th>
<th>Comments</th>
<th>Shared With</th>
<th>Added By</th>
</tr>
</thead>
</table>

## Vehicle Information

<table>
<thead>
<tr>
<th>Year</th>
<th>Make</th>
<th>Model</th>
<th>Is this vehicle owned, financed, or leased?</th>
<th>Primary Use of Vehicle</th>
<th>Estimated Annual Mileage</th>
<th>Miles driven to work and/or school</th>
<th>Calculated Annual Mileage</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Days driven to work and/or school</th>
<th>Estimated Annual Mileage</th>
<th>Calculated Annual Mileage</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Add Vehicle</th>
<th>Edit Vehicle</th>
</tr>
</thead>
</table>
2.2 Application Information flows

**Step 1:** login screen- customer will login to sales portal with assigned username and password

**Step 2:** User’s login info is authenticated
Step 3: If login fails, pop up will appear informing user of entry denied

Step 4: If login authenticated, the user will be directed to homepage welcome screen

Step 5: Upon entering homepage, user will have various options that consist of entering account number for access, providing a quote for prospective customers, and a help feature to assist new employees on complexed topics

2.3 Interactions with other Projects (if Any)

There are no interactions with other projects

2.4 Interactions with other Applications

There is no interaction with other applications at this time. However future improved version make contain this component.

2.5 Capabilities

Our newly designed sales portal will allow employees, no matter what department they primarily work in, to have access to another department’s database and help any customer that calls in. Users will have the ability to use our Wide Area Network to communicate and access all database to obtain the proper resources needed to solve a customer’s conflict.

2.6 Risk Assessment and Management

Risks involve educating our employees to learn new software. Educating our employees on what other departments do. Common bugs are developers initially don’t catch that may prevent the applications fullest capability. Other risk includes our application not being compatible with future Microsoft software updates. We are managing these risks by conducting research and consistent testing.
3 Project Requirements

3.1 Identification of Requirements

- **Software** Requirements
  - Operating System - Windows 10
  - Applications - Microsoft Access 2016
  - Developer Tools
    - Visual Studio 2015
    - ASP.Net
  - Languages - C#

- **Hardware Requirements**
  - Processor: Intel® Core™ i7 – 6500U CPU @ 2.50GHz 2.60 GHz
  - Installed Memory (RAM): 16.0 GB
  - System Type: 64-bit Operating System, x64-based processor

- Obtain Resources
  - Prospect/Client Information
  - Administrators
  - Insurance Information
  - Create Database
  - Tables and Relationships

3.2 Operations, Administration, Maintenance and Provisioning (OAM&P)

Our sales portal admin will conduct daily maintenance, to ensure proper functioning. Our servers will use ECC technology to prevent errors from occurring.

3.3 Security and Fraud Prevention

We will use an enhanced user authentication system that will provide basic security for our sales portal. This system will demand users change their password twice a year to prevent fraud.

3.4 Release and Transition Plan

Our insurance company plans on releasing our new sales portal by the summer of 2017. We will begin by slowly transitioning the new sales portal to employees first regionally. Each month, we will add a new region to test out new portal and to become efficient in it.

4 Project Design Description

We used asp.net on the front end and Microsoft Access on the backend for this project. Access is our database which we created using table to structure our data onto.
5 Project Internal/external Interface Impacts and Specification

In the event that deployment is reached through successful login in our Sales Portal, the user will have access to other pages that will work with our Microsoft Access database thru the back end. Upon successful login, the user can make changes to the account and attend to the customer’s needs.

6 Project Design Units Impacts

Our database is integrated into our design. The impact of this will be more cost effective and allow users to have more access to individual needs. The requirements are the same as in in section 3.
6.2. Screenshots
New customer registration

Existing customer Login
7. Data

**Employee Table:**

This table shows the design view of the data table. In this table we included the employee details with his ID, name and position. Here ID is the primary key which is used to identify the employee. The data type column shows the format of data to be included.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee ID</td>
<td>Number</td>
</tr>
<tr>
<td>Employee First Name</td>
<td>Long Text</td>
</tr>
<tr>
<td>Employee Last Name</td>
<td>Long Text</td>
</tr>
<tr>
<td>Position</td>
<td>Long Text</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employee ID</th>
<th>Employee First Name</th>
<th>Employee Last Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>185408</td>
<td>Jasmine</td>
<td>Eid</td>
<td>Administrator</td>
</tr>
<tr>
<td>1148250</td>
<td>Peter</td>
<td>Ilori</td>
<td>Administrator</td>
</tr>
<tr>
<td>1165499</td>
<td>Mounik</td>
<td>Gopireddy</td>
<td>Administrator</td>
</tr>
<tr>
<td>1165500</td>
<td>Roopa</td>
<td>Mathi</td>
<td>Administrator</td>
</tr>
</tbody>
</table>

**Login Details:**

This table shows the login credentials of the employees which includes the user id, password and the employee id is the foreign key.

<table>
<thead>
<tr>
<th>User ID</th>
<th>Password</th>
<th>Employee ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeid</td>
<td>Jeid2016</td>
<td>185408</td>
</tr>
<tr>
<td>Mgopireddy</td>
<td>Mgopireddy2016</td>
<td>1165499</td>
</tr>
<tr>
<td>Pilori</td>
<td>Pilori2016</td>
<td>1148250</td>
</tr>
<tr>
<td>Rmathi</td>
<td>Rmathi2016</td>
<td>1165500</td>
</tr>
</tbody>
</table>

**Clients Details:**

This table includes the client details. Here we use the client id as the primary key to identify the client. From this table we can fetch the required client information. Since our portal is user friendly any client can register into it and his information will be updated into the database.
### Login Information:

This table includes the particular client id and his password for login into the portal.

<table>
<thead>
<tr>
<th>Client ID</th>
<th>First Name</th>
<th>Last Name</th>
<th>Address</th>
<th>Apt</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
<th>Date of Birth</th>
<th>Age</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>243-27-4428</td>
<td>Linda</td>
<td>Alexander</td>
<td>7907 18th St</td>
<td>1</td>
<td>Tinley Park</td>
<td>IL</td>
<td>60477</td>
<td>02/25/1978</td>
<td>38</td>
<td>708-235-5624</td>
<td><a href="mailto:lalander78@hotmail.com">lalander78@hotmail.com</a></td>
</tr>
<tr>
<td>243-27-5950</td>
<td>Susan</td>
<td>Alex</td>
<td>8955 Linden Ave</td>
<td>2S</td>
<td>Tinley Park</td>
<td>IL</td>
<td>60477</td>
<td>02/25/1986</td>
<td>30</td>
<td>630-541-2563</td>
<td><a href="mailto:salerendra8@yahoo.com">salerendra8@yahoo.com</a></td>
</tr>
<tr>
<td>215-50-3232</td>
<td>Adam</td>
<td>Jameson</td>
<td>109 West Lincoln Street</td>
<td>2</td>
<td>Peotone</td>
<td>IL</td>
<td>60468</td>
<td>07/01/1966</td>
<td>50</td>
<td>219-565-5465</td>
<td><a href="mailto:jameson69@hotmail.com">jameson69@hotmail.com</a></td>
</tr>
<tr>
<td>216-42-5426</td>
<td>Debra</td>
<td>Harrison</td>
<td>1124 Ardmore St</td>
<td>1</td>
<td>Peotone</td>
<td>IL</td>
<td>60468</td>
<td>11/15/1996</td>
<td>20</td>
<td>312-907-4509</td>
<td><a href="mailto:dharrison69@hotmail.com">dharrison69@hotmail.com</a></td>
</tr>
<tr>
<td>323-25-4545</td>
<td>Martin</td>
<td>Cage</td>
<td>115 North 3rd St</td>
<td>18</td>
<td>Peotone</td>
<td>IL</td>
<td>60468</td>
<td>08/02/1980</td>
<td>36</td>
<td>312-980-7900</td>
<td><a href="mailto:mcage68@gmail.com">mcage68@gmail.com</a></td>
</tr>
<tr>
<td>333-07-8444</td>
<td>Barbara</td>
<td>Johnson</td>
<td>1724 Queen Anne Lane</td>
<td>1A</td>
<td>Tinley Park</td>
<td>IL</td>
<td>60477</td>
<td>04/29/1953</td>
<td>21</td>
<td>813-280-5625</td>
<td><a href="mailto:bjohnson90@gmail.com">bjohnson90@gmail.com</a></td>
</tr>
<tr>
<td>342-73-5000</td>
<td>Alexander</td>
<td>Rogers</td>
<td>807 Exeland St</td>
<td>1</td>
<td>Elmhurst</td>
<td>IL</td>
<td>60126</td>
<td>10/04/1968</td>
<td>52</td>
<td>773-725-5656</td>
<td><a href="mailto:xrogers66@gmail.com">xrogers66@gmail.com</a></td>
</tr>
<tr>
<td>343-58-2900</td>
<td>LW</td>
<td>Harrison</td>
<td>360 South St</td>
<td>1</td>
<td>Elmhurst</td>
<td>IL</td>
<td>60126</td>
<td>09/24/1975</td>
<td>41</td>
<td>713-504-0068</td>
<td><a href="mailto:wharrison75@gmail.com">wharrison75@gmail.com</a></td>
</tr>
<tr>
<td>346-85-8079</td>
<td>Shirley</td>
<td>Engles</td>
<td>4162 West Barry Ave</td>
<td>1</td>
<td>Chicago</td>
<td>IL</td>
<td>60411</td>
<td>02/13/1982</td>
<td>34</td>
<td>312-618-4284</td>
<td><a href="mailto:cengles23@gmail.com">cengles23@gmail.com</a></td>
</tr>
<tr>
<td>351-45-7959</td>
<td>Anthony</td>
<td>Benson</td>
<td>7725 Natchez Ave</td>
<td>101</td>
<td>Burbank</td>
<td>IL</td>
<td>60459</td>
<td>06/12/1954</td>
<td>75</td>
<td>312-552-7520</td>
<td><a href="mailto:abenson40@yahoo.com">abenson40@yahoo.com</a></td>
</tr>
<tr>
<td>355-57-2135</td>
<td>Tony</td>
<td>Allen</td>
<td>7844 Mountain Ave</td>
<td>1</td>
<td>Burbank</td>
<td>IL</td>
<td>60459</td>
<td>09/14/1945</td>
<td>71</td>
<td>708-952-9051</td>
<td><a href="mailto:talles45@hotmail.com">talles45@hotmail.com</a></td>
</tr>
<tr>
<td>354-75-1221</td>
<td>Jenny</td>
<td>Smith</td>
<td>308 Mortonberry Drive</td>
<td>1</td>
<td>Naperville</td>
<td>IL</td>
<td>60540</td>
<td>01/01/1950</td>
<td>66</td>
<td>708-485-0202</td>
<td><a href="mailto:jsmith50@hotmail.com">jsmith50@hotmail.com</a></td>
</tr>
<tr>
<td>354-89-2023</td>
<td>Derrick</td>
<td>Matthews</td>
<td>20445 Doris Lane</td>
<td>1</td>
<td>Olympia Fields</td>
<td>IL</td>
<td>60461</td>
<td>03/25/1975</td>
<td>41</td>
<td>815-650-5802</td>
<td><a href="mailto:dmattews45@gmail.com">dmattews45@gmail.com</a></td>
</tr>
<tr>
<td>354-98-5065</td>
<td>Mark</td>
<td>Andrews</td>
<td>3058 London Ave</td>
<td>28</td>
<td>Olympia Fields</td>
<td>IL</td>
<td>60461</td>
<td>03/24/1965</td>
<td>51</td>
<td>219-500-8700</td>
<td><a href="mailto:manrews10@hotmail.com">manrews10@hotmail.com</a></td>
</tr>
<tr>
<td>359-70-9119</td>
<td>Cynthia</td>
<td>Evans</td>
<td>6065 North Newburg Ave</td>
<td>1</td>
<td>Chicago</td>
<td>IL</td>
<td>60611</td>
<td>02/25/1986</td>
<td>39</td>
<td>630-480-4265</td>
<td><a href="mailto:cevans86@yahoo.com">cevans86@yahoo.com</a></td>
</tr>
<tr>
<td>359-06-1428</td>
<td>Eric</td>
<td>Hobbs</td>
<td>2625 Great Road</td>
<td>301</td>
<td>Olympia Fields</td>
<td>IL</td>
<td>60461</td>
<td>05/06/1974</td>
<td>47</td>
<td>713-850-0020</td>
<td><a href="mailto:ehobbs74@gmail.com">ehobbs74@gmail.com</a></td>
</tr>
<tr>
<td>373-56-2900</td>
<td>George</td>
<td>Harris</td>
<td>416 East Crawford Street</td>
<td>1</td>
<td>Peotone</td>
<td>IL</td>
<td>60468</td>
<td>06/08/1975</td>
<td>41</td>
<td>312-560-5456</td>
<td><a href="mailto:gharris75@hotmail.com">gharris75@hotmail.com</a></td>
</tr>
<tr>
<td>375-50-7901</td>
<td>Henry</td>
<td>Scott</td>
<td>110 Graymoore Lane</td>
<td>1</td>
<td>Olympia Fields</td>
<td>IL</td>
<td>60461</td>
<td>04/25/1969</td>
<td>47</td>
<td>773-544-4456</td>
<td><a href="mailto:hscott69@gmail.com">hscott69@gmail.com</a></td>
</tr>
<tr>
<td>375-66-8526</td>
<td>Alex</td>
<td>Johnson</td>
<td>91 Remo Court</td>
<td>2A</td>
<td>Naperville</td>
<td>IL</td>
<td>60540</td>
<td>02/25/1973</td>
<td>48</td>
<td>773-259-5002</td>
<td><a href="mailto:ajohnson73@gmail.com">ajohnson73@gmail.com</a></td>
</tr>
<tr>
<td>389-56-6259</td>
<td>Melissa</td>
<td>Franks</td>
<td>1282 82nd Street</td>
<td>1</td>
<td>Downers Grove</td>
<td>IL</td>
<td>60515</td>
<td>08/20/1968</td>
<td>28</td>
<td>312-886-8683</td>
<td><a href="mailto:mfranks88@gmail.com">mfranks88@gmail.com</a></td>
</tr>
<tr>
<td>395-75-7910</td>
<td>Jacob</td>
<td>Mills</td>
<td>460 South Slight Street</td>
<td>1</td>
<td>Naperville</td>
<td>IL</td>
<td>60540</td>
<td>07/12/1989</td>
<td>27</td>
<td>312-496-7889</td>
<td><a href="mailto:jmills89@gmail.com">jmills89@gmail.com</a></td>
</tr>
<tr>
<td>395-52-8601</td>
<td>Jake</td>
<td>Johnson</td>
<td>1425 Lark Lane</td>
<td>101</td>
<td>Naperville</td>
<td>IL</td>
<td>60545</td>
<td>02/25/1999</td>
<td>17</td>
<td>708-588-4528</td>
<td><a href="mailto:jjohnson99@hotmail.com">jjohnson99@hotmail.com</a></td>
</tr>
<tr>
<td>395-88-9998</td>
<td>Johnny</td>
<td>Henderson</td>
<td>656 West Royal Lane</td>
<td>1</td>
<td>Peotone</td>
<td>IL</td>
<td>60468</td>
<td>08/08/1977</td>
<td>39</td>
<td>815-460-6525</td>
<td><a href="mailto:jhenderson77@gmail.com">jhenderson77@gmail.com</a></td>
</tr>
<tr>
<td>403-58-548</td>
<td>Larry</td>
<td>Owens</td>
<td>225 Elmwood Drive</td>
<td>1</td>
<td>Naperville</td>
<td>IL</td>
<td>60540</td>
<td>10/12/1999</td>
<td>17</td>
<td>219-698-5700</td>
<td><a href="mailto:lowens99@gmail.com">lowens99@gmail.com</a></td>
</tr>
</tbody>
</table>

### Relationships:

In this relational diagram the clients to login information of clients is one to one relation because one client will have particular login information. The employee table will have one to many relation with user id because one employee can login many clients. Using this relational diagram we can describe the relation between various fields of the database.
Requirements:

Hardware Requirements:

- Processor: Intel® Core™ i7 – 6500U CPU @2.50GHz 2.60 GHz
- Installed Memory (RAM): 16.0 GB
- System Type: 64-bit Operating System, x64-based processor

Software Requirements:

- Operating System: Windows 10
- Application – Microsoft Access 2016
- Developer Tools: Visual Studio and ASP.net

Project Work Flow:

- In the first step we created the project abstract with the main idea of the project.
- In the second stage we gathered the information required for the project, downloaded the required software and installed.
- We created the database using Access 2016 for the project and developed the code using ASP.net
- We build the login and website pages in the visual studio.
- We tested and executed the project.

Future Developments:

- Mobile application for android and ios users
- Automatic Email alerts for the clients like bill payments, offers etc
We are also looking forward to widen the project by adding more features like Health and Rentals Insurances.

8. Acknowledgements

I would like to thank Professor Do Young Park for all his efforts in assisting my group members and I in the completion of this project. His advice and input was much needed for us to succeed in this course. We are very thankful for his encouragement and feedback. Professor Park’s expertise guided us through the completion of our sales portal. I would also like to thank my team members for their input, and contribution in completing this project.

9. References


