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Fall 2016

Sales Management Portal

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ABSTRACT

The sales management portal:

The sales management portal is mostly used to process and store the data of the client and the staff this helps us in maintaining the records and manage the sales environment in the most proper way this portal helps us to have a better communication with the client and help the client to know about the services we provide

This portal helps the employees to make proposals that could increase the sales and help them to work with the other staff towards the project this is also essential for the managers to organize the work force and manage the resources

There are different modules in this portal they are as follows

- Client module
- Administrator Module
- Search Module

Client Module:

The client has a module he could login and see the opportunities i.e. products and services provided to the client and he could opt in for the newsletter and have the project updates and he could see the project status and progress reports and log out

Administrator Module:

The Administrator has a module giving him a complete access to the project reports proposals, client details, employee details and manager details he manages the project reports, client reports, project status and progress reports, project duration and Amount details have been accessed and regulated by the administrator the user/employee and the manager login and profile details and access information and adding and deleting employees, client and managers is also been processed by the administrator.

Search Module:

This module helps the user and administrator to search the opportunity's and filter them and give us the appropriate and precise search results based on the key words entered in the search bar this helps the users and the administrator to sort the client list carefully and they don't have to browse through the entire database to look for one client.

Sub Forms:

In the sale project we have sub forms which has been divided into 5 categories

- **General info:** This form consists of general information of the client.
- **Contacts:** This form consists of the contact information of the client.
- **Notes:** This form consists of the special required information of the client.
- **Opportunities:** This form consists of the required opportunities of the client.
- **Proposal:** This form consists of proposal required for the clients.
- **Project:** This form consists of the information of the projects.

All the above sub forms have different sub categories in their form which can added, deleted and can be modified by the admin only. These forms give us a clear idea about the information that has been gathered for the project by the client.

Security:

The above Processes have the two step verifications for the login processes for security purposes and the manager, employee and the client have the mobile friendly applications that could easily work with their respective portable devices

Technical Details

- **UI:** HTML 5, CSS3
- **Tools:** Microsoft Visual Studio 2015
- **Database:** My SQL
- **Operating System:** Windows 10
- **Web Application Tools:** JavaScript, JSP

Table of Content

1	<i>Project Description</i>	1
1.1	Competitive Information	1
1.2	Relationship to Other Applications/Projects	1
1.3	Assumptions and Dependencies	1
1.4	Future Enhancements	1
1.5	Definitions and Acronyms	2
2	<i>Project Technical Description</i>	3
2.1	Application Architecture	3
2.2	Application Information flows	4
2.3	Interactions with other Projects (if Any)	4
2.4	Interactions with other Applications	4
2.5	Capabilities	4
2.6	Risk Assessment and Management	5
3	<i>Project Requirements</i>	5
3.1	Identification of Requirements	5
3.2	Operations, Administration, Maintenance and Provisioning (OAM&P)	6
3.3	Security and Fraud Prevention	6
3.4	Release and Transition Plan	6
4	<i>Project Design Description</i>	6
5	<i>Internal/external Interface Impacts and Specification</i>	7
6	<i>Design Units Impacts</i>	9
6.1	Functional Area A/Design Unit A	9
6.1.1	<i>Functional Overview</i>	9
6.1.2	<i>Impacts</i>	9
6.1.3	<i>Requirements</i>	9
7	<i>Open Issues</i>	10
8	<i>Acknowledgements</i>	10
9	<i>References</i>	10

1 Project Description

The project is a sales management portal to keep track the activities of client information portal. This project is a conceptual design for a company's sales pipeline database portal, at which sales staff enter clients' information into pipeline by keeping the logs of contacts and activities, opportunities and proposals, and eventually projects. The portal enables management to oversee works and track progresses, and in the meantime to interact with and provide guidance to sales staff timely. The Sales Management Portal that we developed has the following features:

- Search feature which is for the users to find clients by names, either on complete or partial match
- Filter for browsing which is to shorten the list of clients and list of prospects depends on the category
- Registration form and a sign-in form
- Home page to display the latest announcements
- Forms to add the new client, prospect, project, and contacts

Users can create new client's information by providing the necessary details. We can add multiple contacts, notes, prospects, and projects for a client. We developed forms to add client information, client contacts, client notes, client prospects, and client projects. This project records the client information such as contacts, activities, notes, prospects, and projects. The sales management portal main purpose is to track the client projects information in an efficient manner. The whole will be stored in centralized database management system. This particular centralized database management system will reduce the huge data damages which happen unexpectedly and also continuously back up the data for certain period of time.

1.1 Competitive Information

We analyzed different sales management portal applications to add the new features. There are huge number of competitors same as our sales management portal. We will continuously keep add new features and be standalone from other competitors.

1.2 Relationship to Other Applications/Projects

The Sales Management Portal system is related to other features to complete the system design. The necessary features are the database management system, networking requirements, server technology requirements, client scripting, and etc.

1.3 Assumptions and Dependencies

We are accepting that the confinement in the present plan and the plan will be consistent. Framework will have change control which will ask for the future change demands. The User Interface group will have the collaborative effort with the database management group. The project architecture group will make the preparation modules.

1.4 Future Enhancements

We will plan for the future enhancements, that is also depends on the clients who will ask for the enhancements. Once the application getting used then we plan to keep adding the features.

1.5 *Definitions and Acronyms*

SQL – Structured Language Query

CSS – Cascading Style Sheet

DBMS – Database Management System

ACID – Atomicity, Consistency, Isolation, Durability

ERD – Entity Relationship Diagram

UI – User Interface

ASP – Active Server Pages

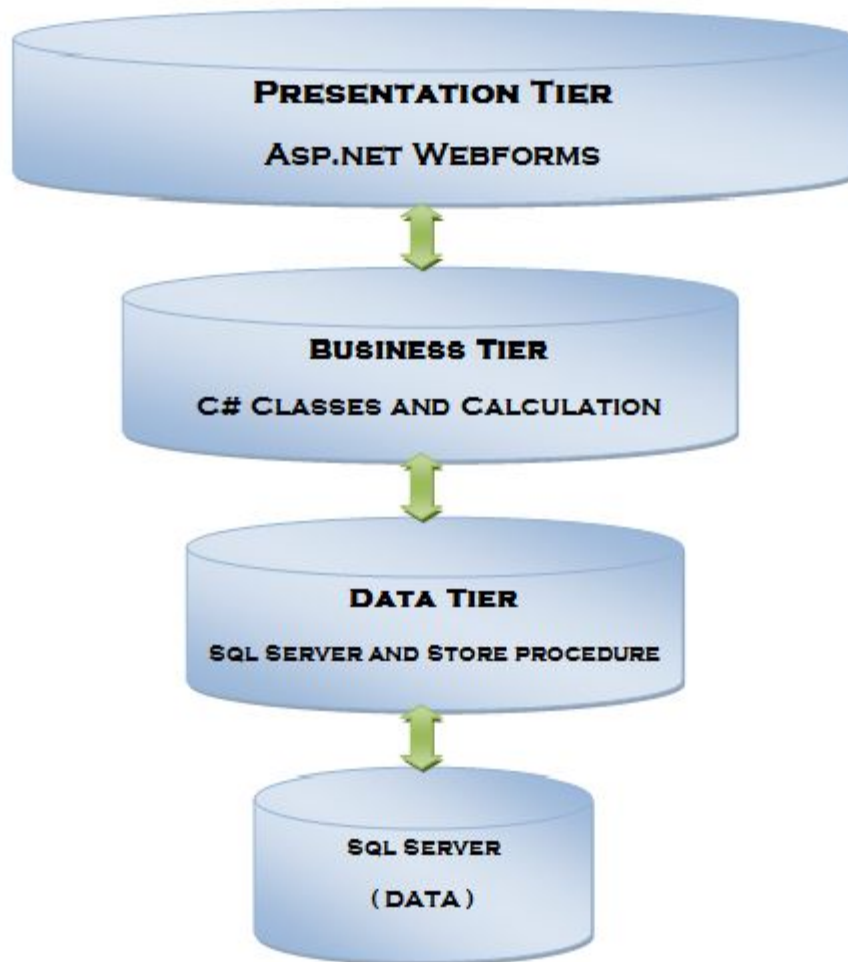
2 Project Technical Description

The Sales Management Portal application is developed using ASP.NET. We designed the application in 3-tier architecture mode. We used client scripting which is jQuery to design the animations and search functionality in the Sales Management Portal application. We used bootstrap framework to design the user interface screens in responsive mode. We also used HTML to develop the web forms. User authentication and authorization has done. We used master pages to design the common layout for multiple pages. We used parsley validation to validate the form elements. It is a third party jQuery library which is useful to validate the form elements. We also used default ASP.NET validation controls to validate some of our form elements. We used web services to load the data using AJAX (Asynchronous JavaScript and XHTML) to call the web services to load the data that returns from the post web service calls. We also debugged the code and also tested the code. The following are the technologies that we used to develop the application.

- HTML, ASP for Front-End Form Controls
- CSS for styling
- jQuery for animations, search functionality, and web service requests
- SQL Server 2012 for Database
- Bootstrap framework for responsive web design
- Master pages for common layout
- Navigation menus for site navigation
- Parsley library for validations
- ASP validations
- C# for server coding
- Web Services for posting data to the server
- Session and Application State Cookies
- User authentication and authorization
- Debugging the code and testing
- Visual Studio as the code IDE (Integrated Development Environment)
- 3-Tier architecture
- Design patterns such as singleton, factory design pattern

2.1 Application Architecture

We developed the application using 3-Tier architecture. The 3 layers are Presentation Layer, Business Logic Layer, and Data Access Layer. Presentation Layer includes the web form design, Business Layer includes the C# class and calculation, and Data Layer includes the SQL Server and Stored Procedures. The 3-tier application architecture is shown in the below figure:



2.2 *Application Information flows*

Application Information Flows describes how the information flows through the application. Different information flows include user information flow; which user sign up for the account then he or she login with the information. Client Information Flow which includes adding the client information, adding one or more contacts to the same client, adding more than one notes, adding more than one prospect to the client information and also adding more than one or more projects to the same client.

2.3 *Interactions with other Projects (if Any)*

No, our project doesn't have interaction with other projects.

2.4 *Interactions with other Applications*

The Sales Management Portal application is unlikely to have interactions with other applications.

2.5 *Capabilities*

The sales portal management system provides the capabilities to create, read, delete, and update the different entities information. The portal management system also provides the capabilities for the manager to monitor, maintain the client information and projects by performing different activities such

as adding notes, prospects, contacts, and projects. The sales portal management system also has the feature to validate the users to secure the information.

2.6 Risk Assessment and Management

The sales portal management system has involving some possibly risks. These risks are database breakdown, table data is not valid, incorrect project information, etc. If the database is break down, then there should be an alternative to use another server. If the client information is not valid, then we have to prevent this risk by validating the client information before inserting into tables. In case of power failures, we have to revert back the data to previous states using locking concepts where the transactions are important for any application to succeed.

3 Project Requirements

3.1 Identification of Requirements

<GSU-GS_SP2016-1 User-Capability-000100>

The project must allow new users to be added, updated, or deleted by the application.

Implementation: Mandatory

<GSU-GS_SP2016-1 Client-Capability-000101>

The project must allow new clients to be added, updated, or deleted by the application.

Implementation: Mandatory

<GSU-GS_SP2016-1 Client-Capability-000103>

The project must allow the users to search for the clients based on a search string.

Implementation: Mandatory

<GSU-GS_SP2016-1 Client-Capability-000104>

The project must allow new contacts to be added, updated, deleted for a selected client.

Implementation: Mandatory

<GSU-GS_SP2016-1 Client-Capability-000105>

The project must allow new prospects to be added, updated, deleted for a selected client.

Implementation: Mandatory

<GSU-GS_SP2016-1 Client-Capability-000106>

The project must allow new notes to be added, updated, deleted for a selected client.

Implementation: Mandatory

<GSU-GS_SP2016-1 Client-Capability-000107>

The project must allow new projects to be added, updated, deleted for a selected client.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000108>

The project must allow users to view the announcements which are being added by the manager.

Implementation: Mandatory

<GSU-GS_SP2016-1 Manager-Capability-000109>

The project must allow managers to approve the clients' projects.

Implementation: Mandatory

<GSU-GS_SP2016-1 Manager-Capability-000110>

The project must allow managers to view the clients' information.

Implementation: Mandatory

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

We do take back up the database on a certain interval base, we also monitor the application performance over a certain period of time.

3.3 Security and Fraud Prevention

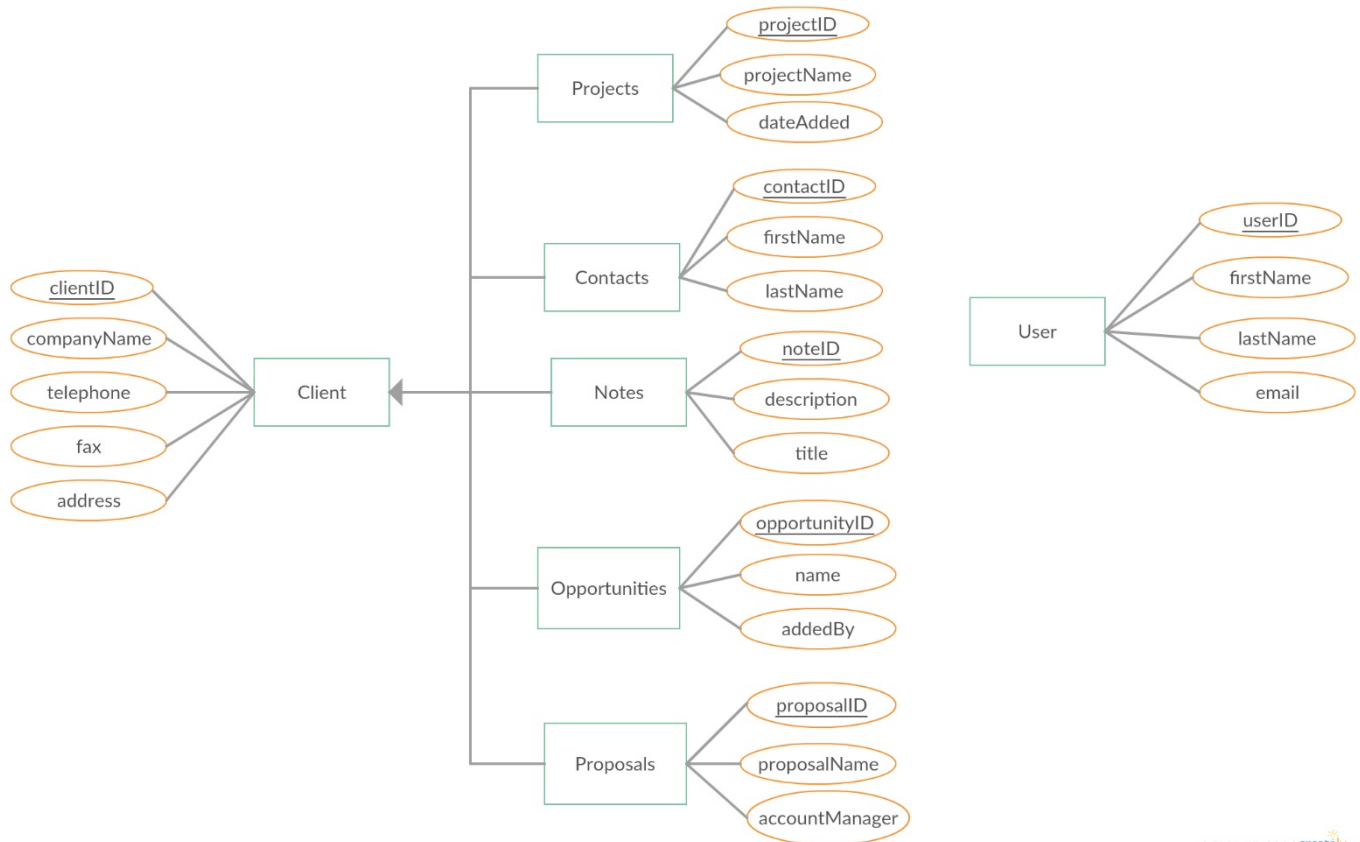
User authorization will be helpful to prevent the site access from the fraudulent users. We can restrict the users based on their access levels.

3.4 Release and Transition Plan

We build and deploy the solution in a local file system. We will also publish the solution in a client requested server. We use the Subversion Control software. This will be helpful to maintain the sub versioning of the source code.

4 Project Design Description

The Sales Management Portal is client server architecture application. The Sales Portal performs several functionalities. We try to keep the Sales Portal design as simple as possible. As the process of project design we designed the Entity Relationship diagram which is given below:



We designed the user interface screens using the HTML programming, CSS, and jQuery. For middleware we used the C# programming language. We used SQL Server 20102 to store the data in database management system.

Design Pattern:

Container pattern is useful for the design problems for the project approval module in the Sales Management Portal System.

Name of the Pattern: Container Pattern

Intent of the pattern: To create objects to hold other objects and manage the objects.

Problem: The project approval module has to hold the information about the project, user and prospect.

Solution: Instantiate the project approval class with the instances for Project, User, and Prospect classes.

Participants and Collaborators: User, Project, and Prospect.

Consequences: Users can't see the project approval details containing of project and user information.

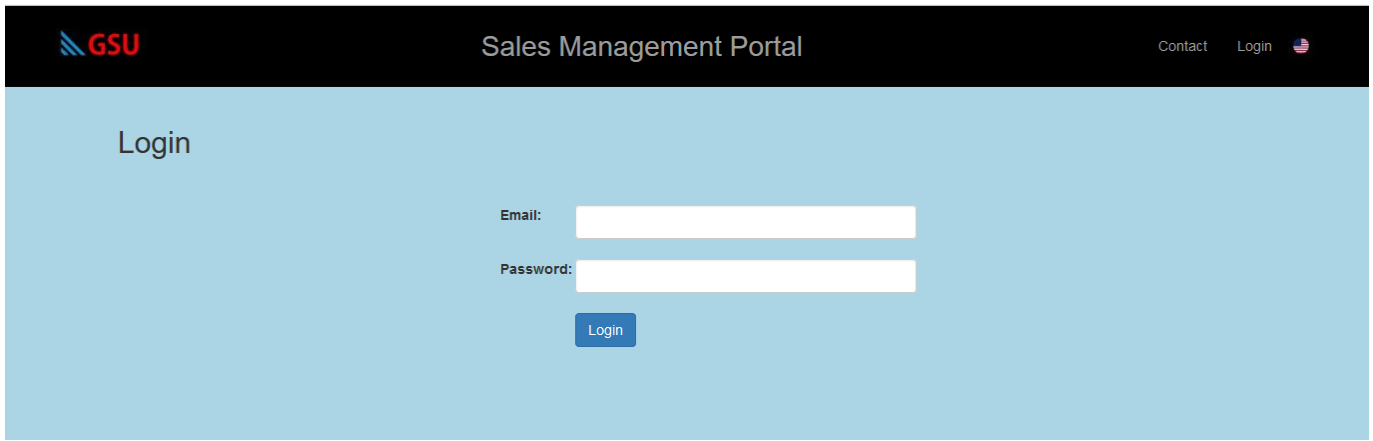
Implementation: Using the container pattern we create the instance for the Project class which contains the instances for the User, Project, and Prospect classes. So, the class can store the information about the User, Project, and Prospect information.

5 Internal/external Interface Impacts and Specification

Interfaces are the important part of the Sales Portal Management System. This sales management portal application contains two modules based on the access level specification to provide the facility to control for the application under a Manager. The user module and Manager module both contains the interfaces according to the functionality. The user module contains the interfaces to create the account, to log in to the account using the specific credentials which will helpful to add the client information, and view the client information. User can also create the contacts, notes, prospects, and projects to the existing client. There is an option to add client information, adding the multiple contacts, notes, prospects, and projects to the existing client. In each and every form the user has enforced to enter the accurate data in the web forms. As part of this process, ASP.NET default validations and parsley plugin validations are being used. Some of the web form designs are provided below.

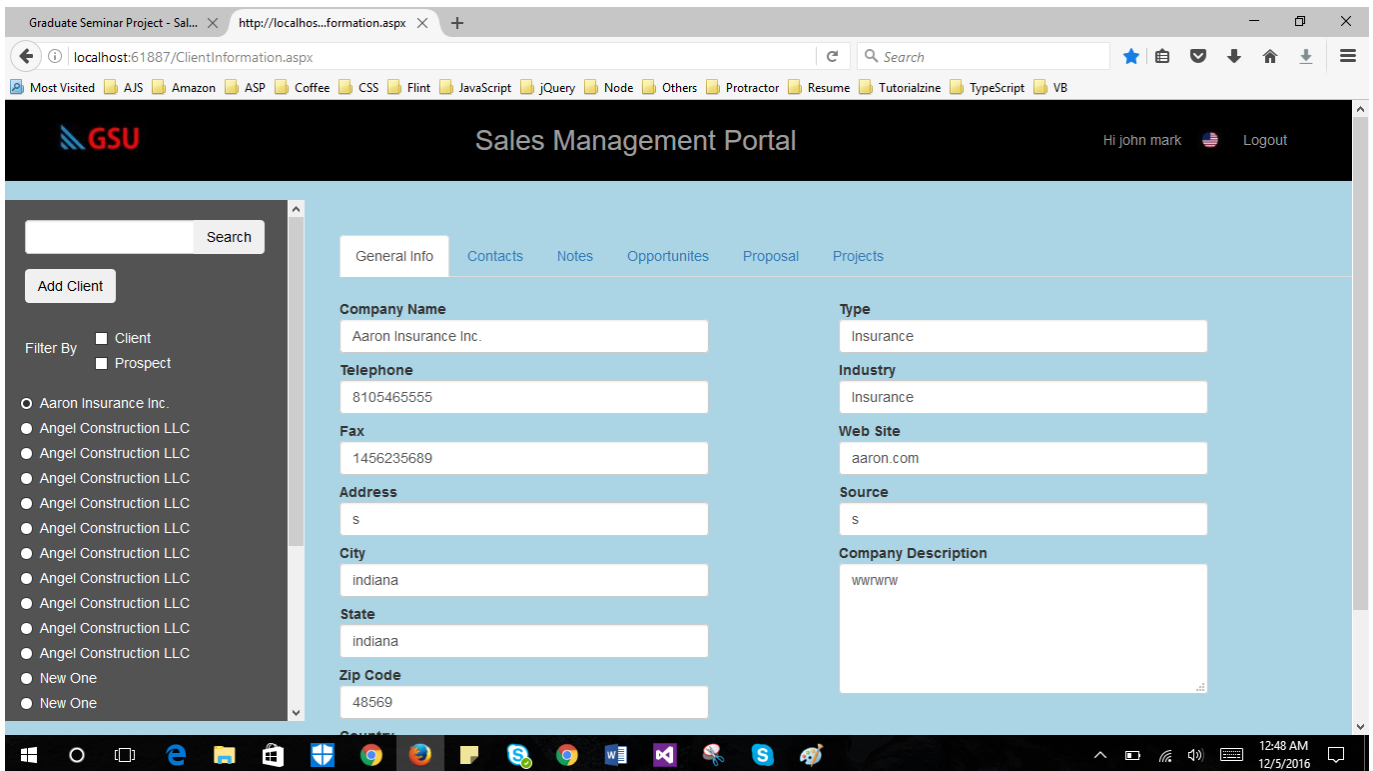
Login Page:

This purpose of the screen is to validate the user by seeking the respective credentials. The below given figure depicts the interface for login module.



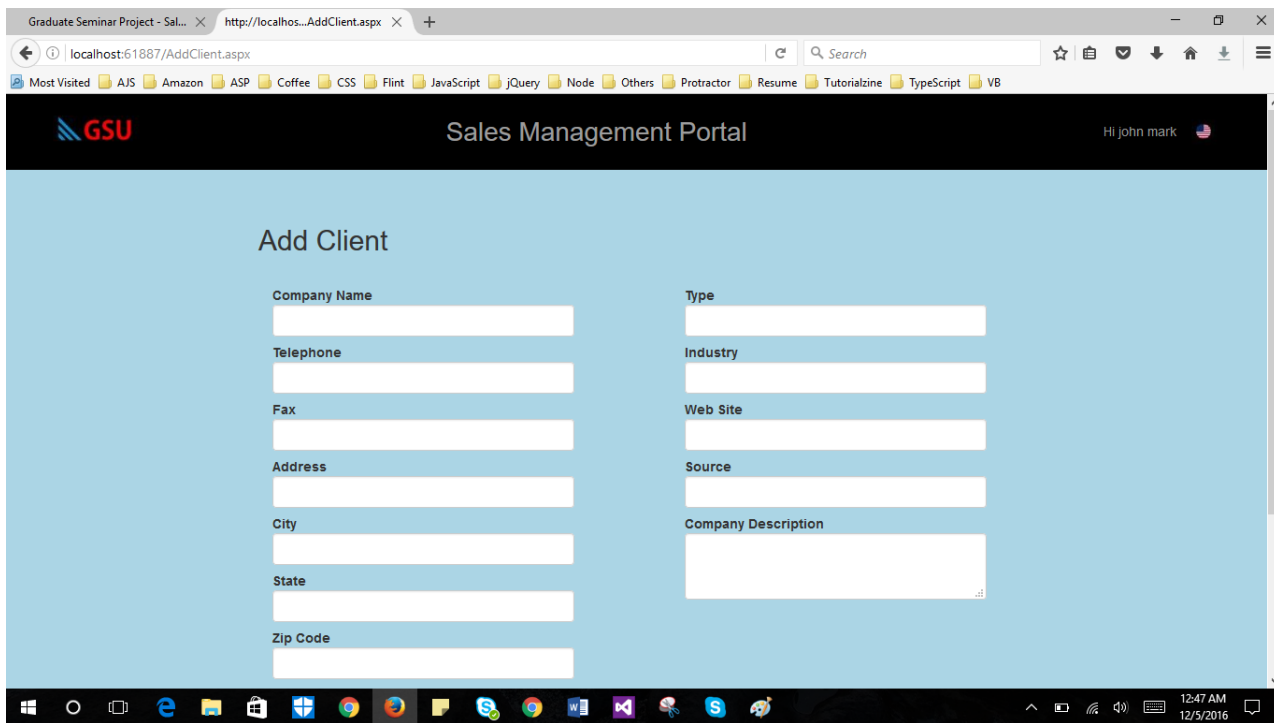
Client Information Page:

The purpose of the screen is to display the client information for the selected client.



Add Client Page:

The purpose of the screen is to add the client information page. The below figure depicts the add client information design.



6 *Design Units Impacts*

In this module user can view the information of the website and the user can also add the client information, can add the multiple contacts, notes, prospects, and projects. User has to login into the system for the adding the client information. User can view only view the client information of the web site. This contains sub modules like registration module, prospect module, and project module.

6.1 *Functional Area A/Design Unit A*

6.1.1 *Functional Overview*

User module contains the functionality to set up an account with the Sales Management Portal web application, posting new client information to the portal and also to add the notes, contacts, prospects, and project information.

6.1.2 *Impacts*

This is important module of the Sales Management Portal System. This module contains all the information that user can register, login, manage the client information. In this module, user can register for the can add the contacts, notes, prospect, and project information. The user can also update the information.

6.1.3 *Requirements*

User Requirements:

The user must be able to create a client, and also to add contacts, notes, prospects, and projects for sales portal.

Access/Security requirements:

The data of the client should be in private so that it cannot be accessed by other users. The user has to be authenticated by the system software using the OAuth method.

Interface requirements:

The user interface provides a way to create client, view clients, search for the clients, and filter the clients among the list of clients. The user should be able to edit the existing clients and update client details easily.

Scalability requirements:

The system software must be able to handle many user requests. Bulk amount of data should be easily stored, retrieved and processed by the system software.

Integration requirements:

Both the sales management portal and client information module must be integrated and deployed in the system software.

Quality and Performance requirements:

Data storage & retrieval should be as quick as possible. The maintenance of events and payment details should have maintained with highest level of security.

7 Open Issues

There are no current open issues at this time.

8 Acknowledgements

We have taken effort in this project report. However, it wouldn't have possibly done without the kind support from our professor and help of many individuals and organizations. We would like to extend our sincere thanks to all of them who assisted us in our project completion.

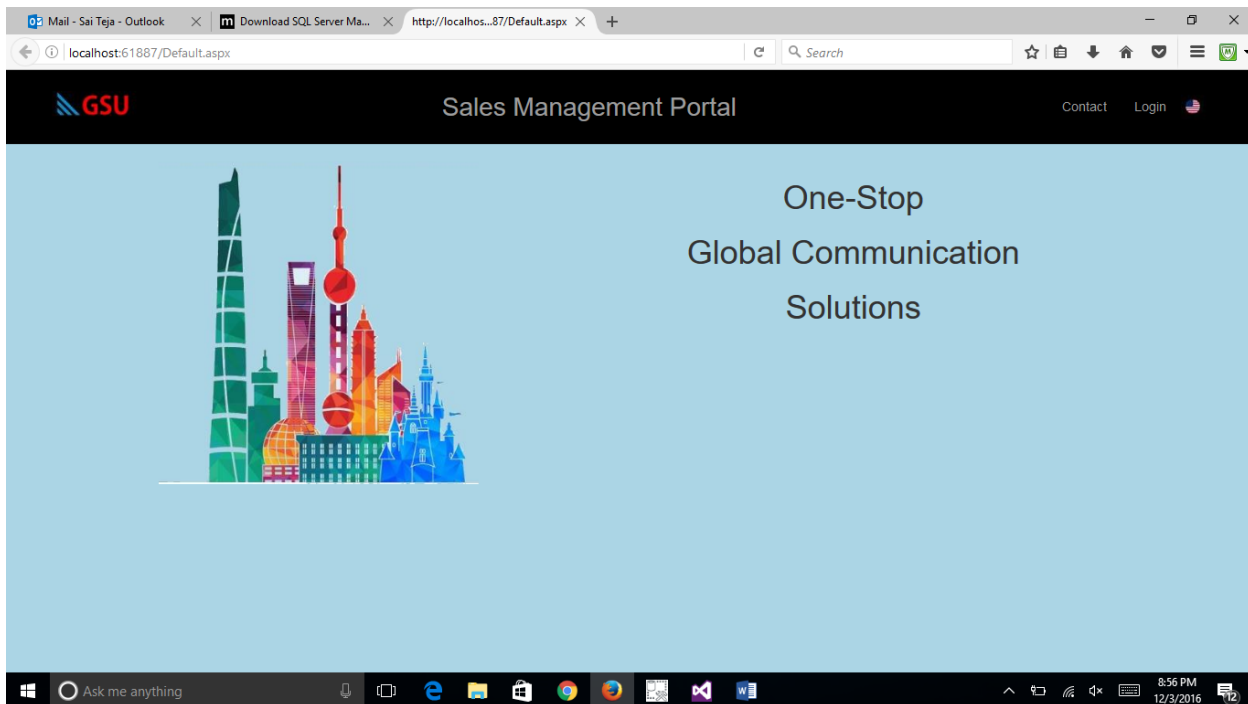
9 References

E. Gamma, R. Helm, R. Johnson, and J. Vlissides, Design Patters: Elements of Reusable Object-Oriented Software. Addison-Wesley, 1995.

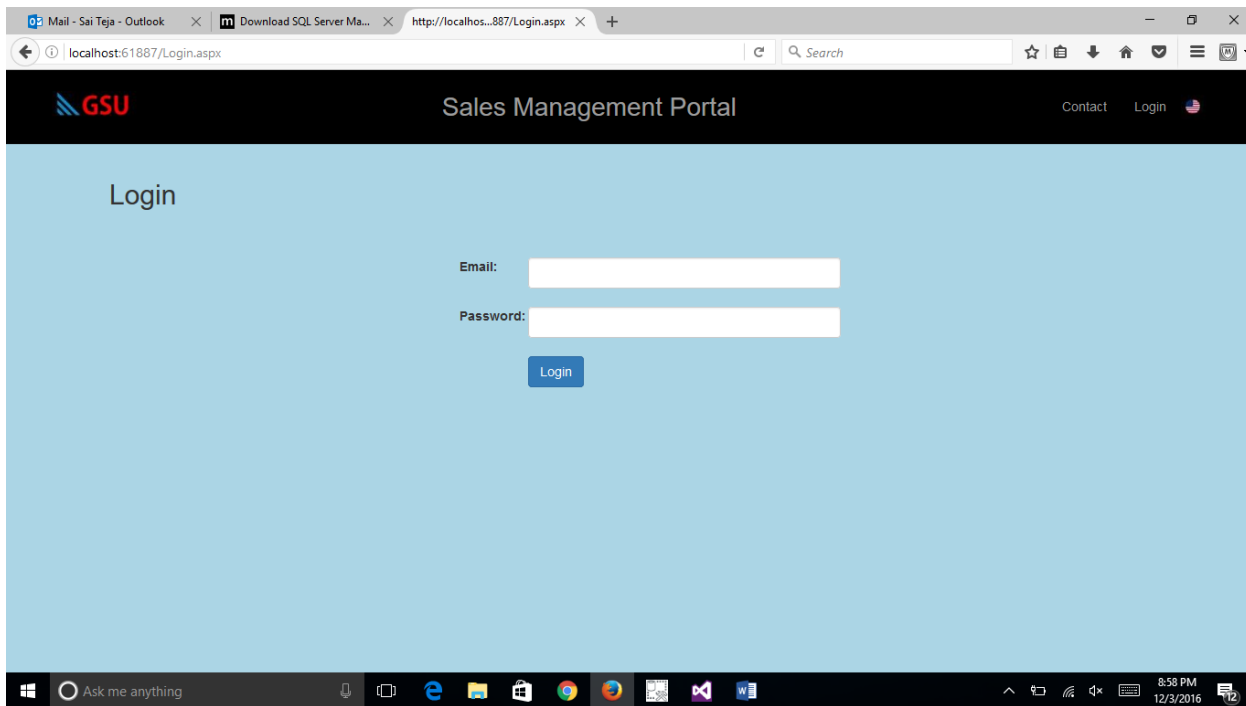
<http://geekswithblogs.net/edison/archive/2009/04/05/a-simple-3-tier-layers-application-in-asp.net.aspx>

Project Screenshots: -

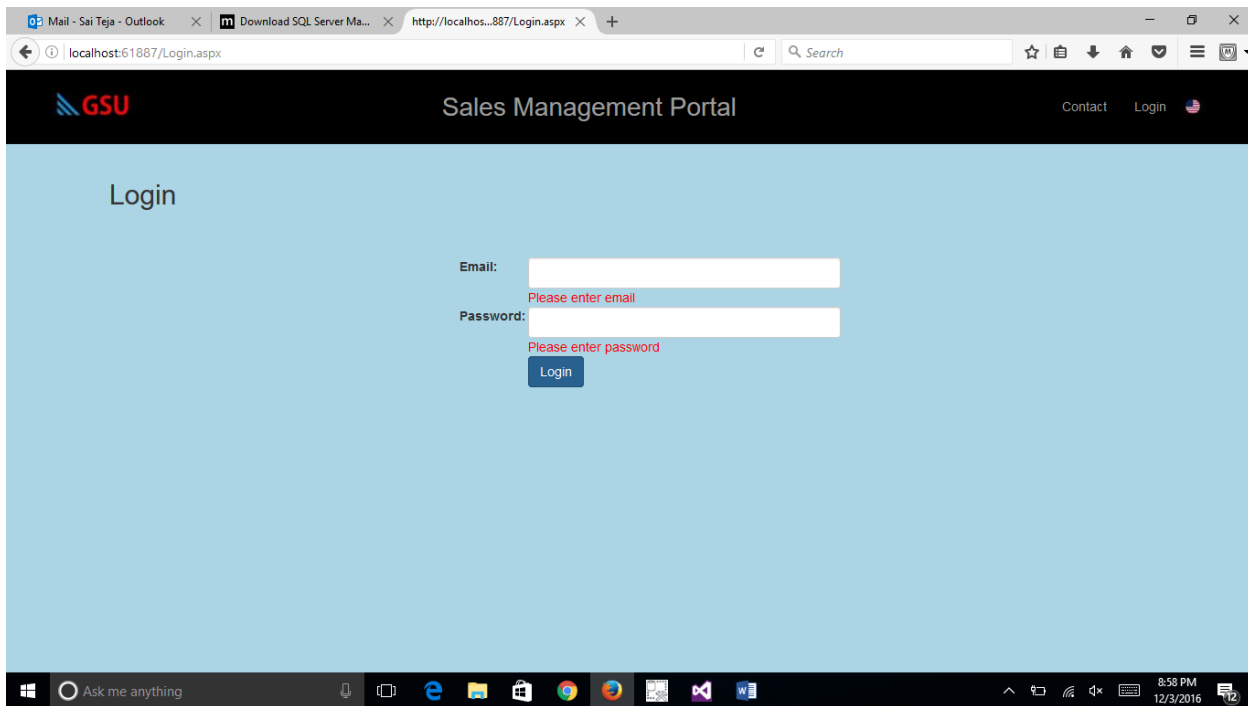
Home Page



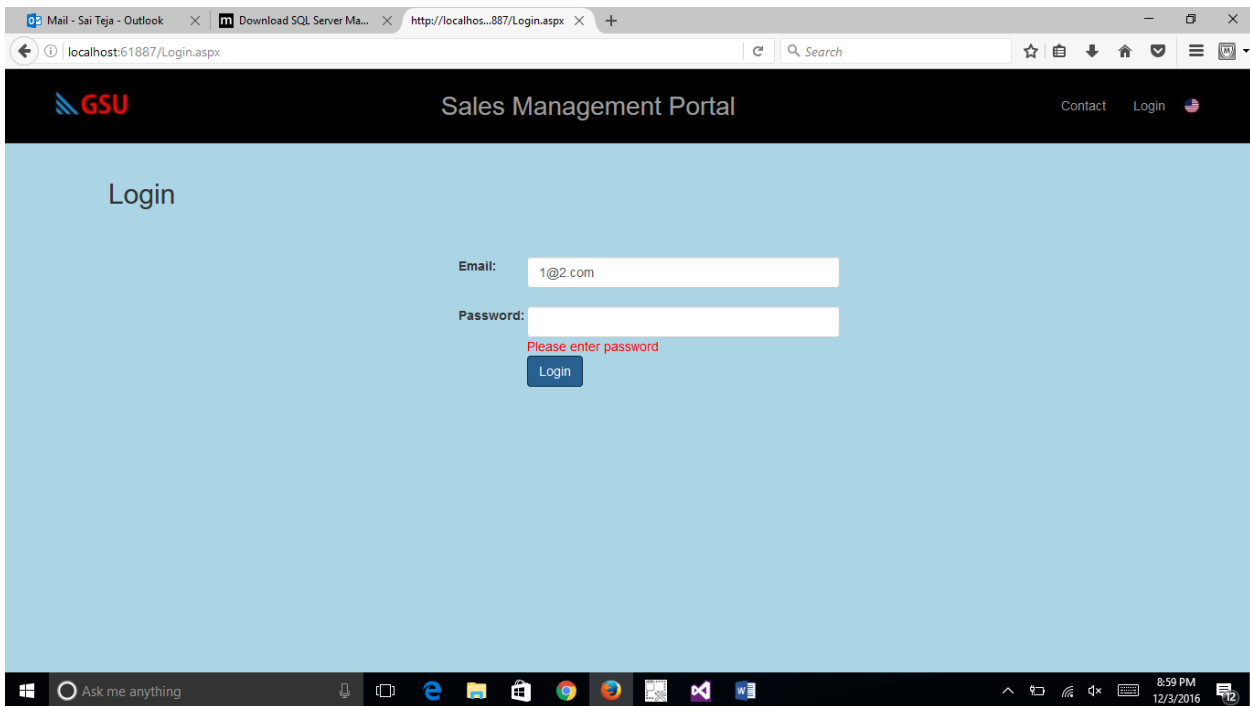
Login Page:



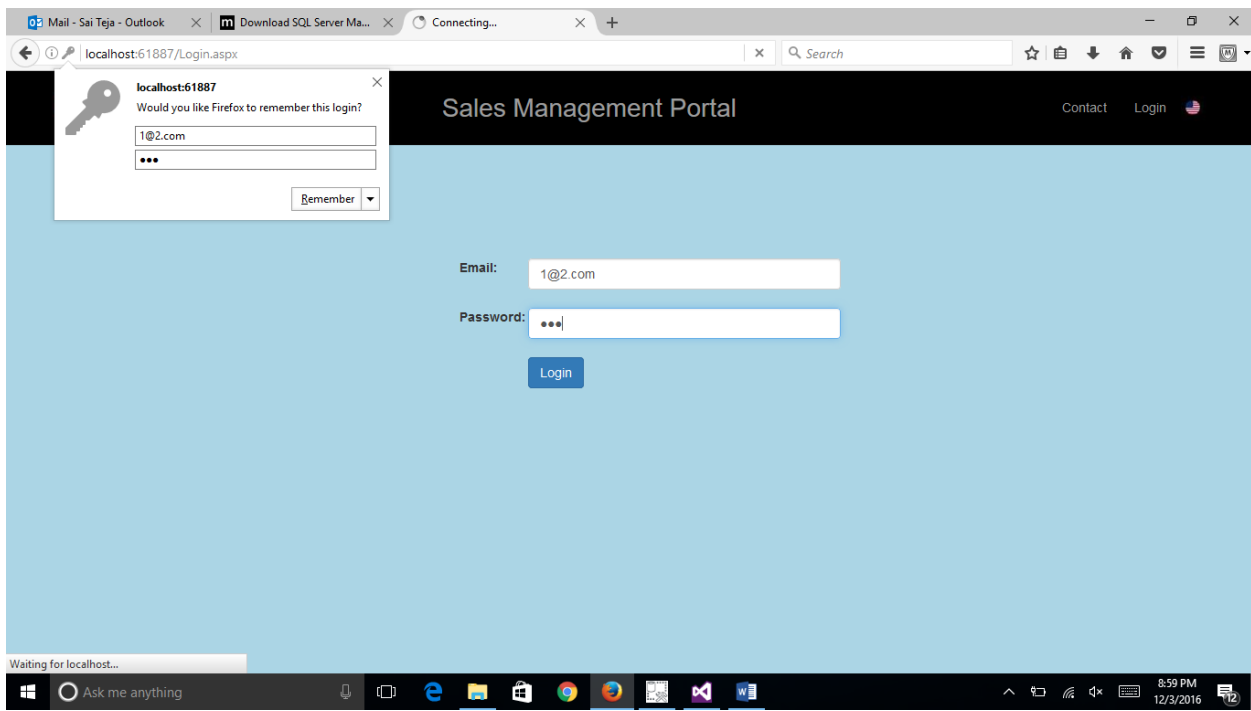
Login Validations:



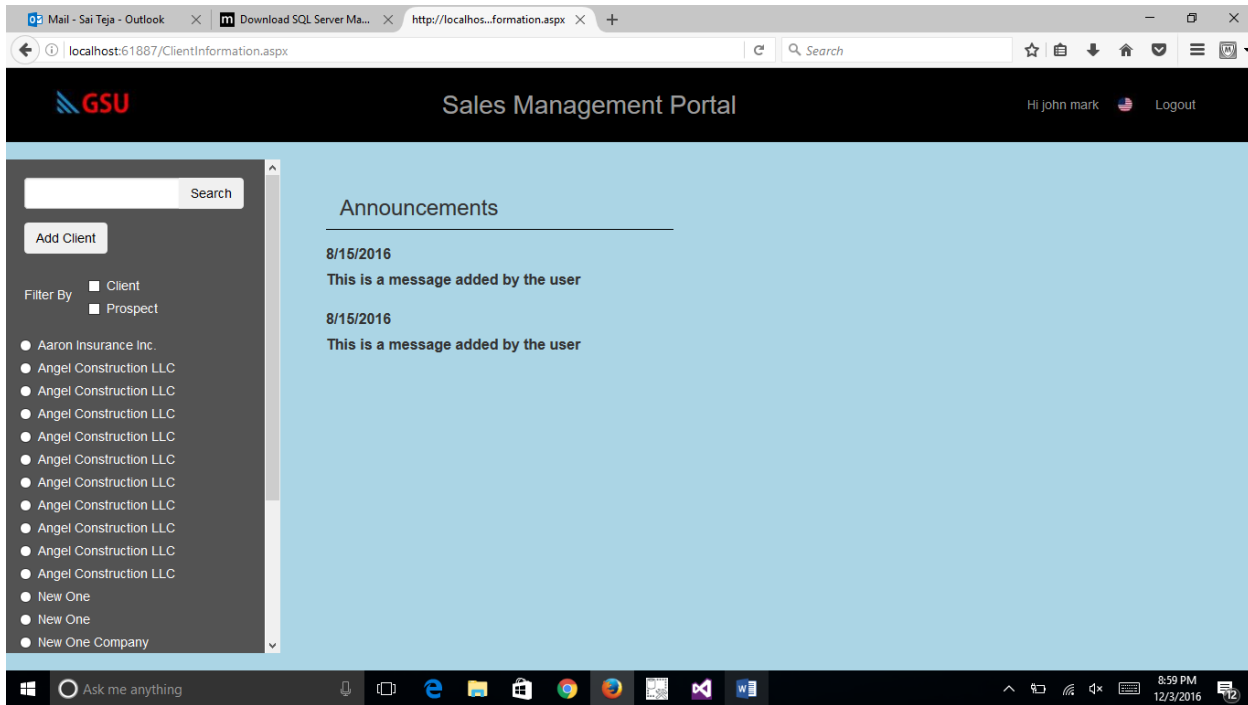
2:

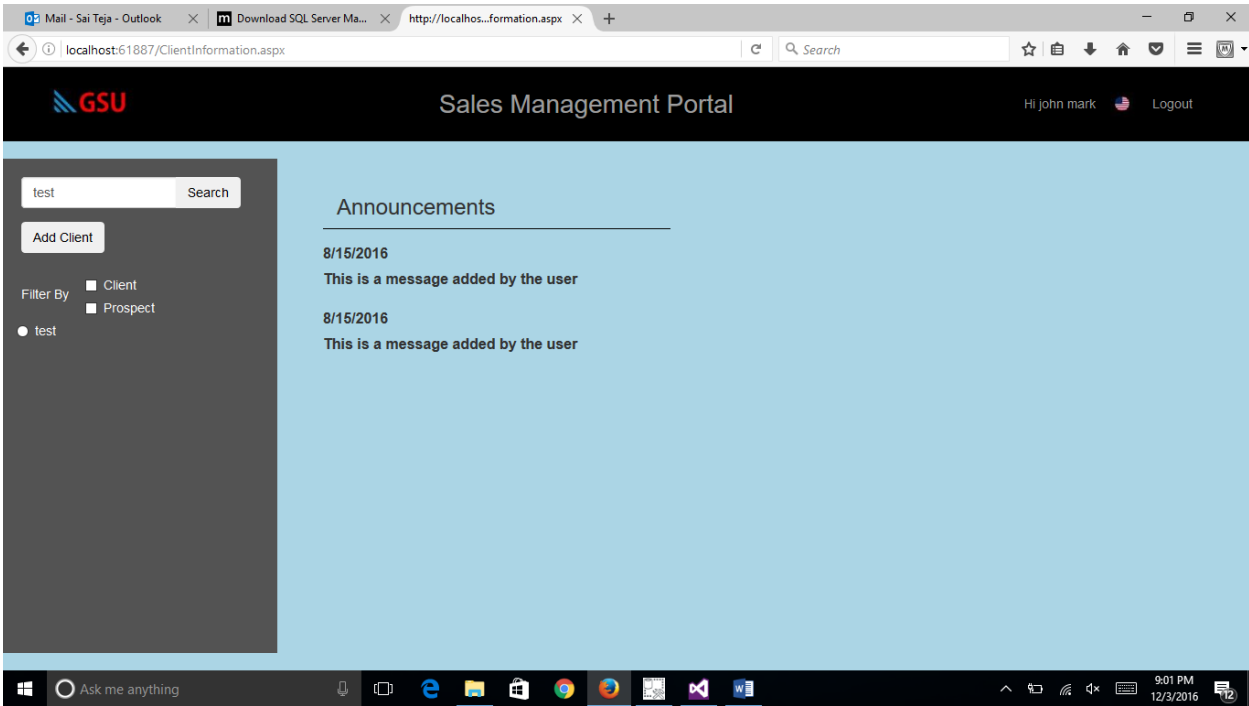
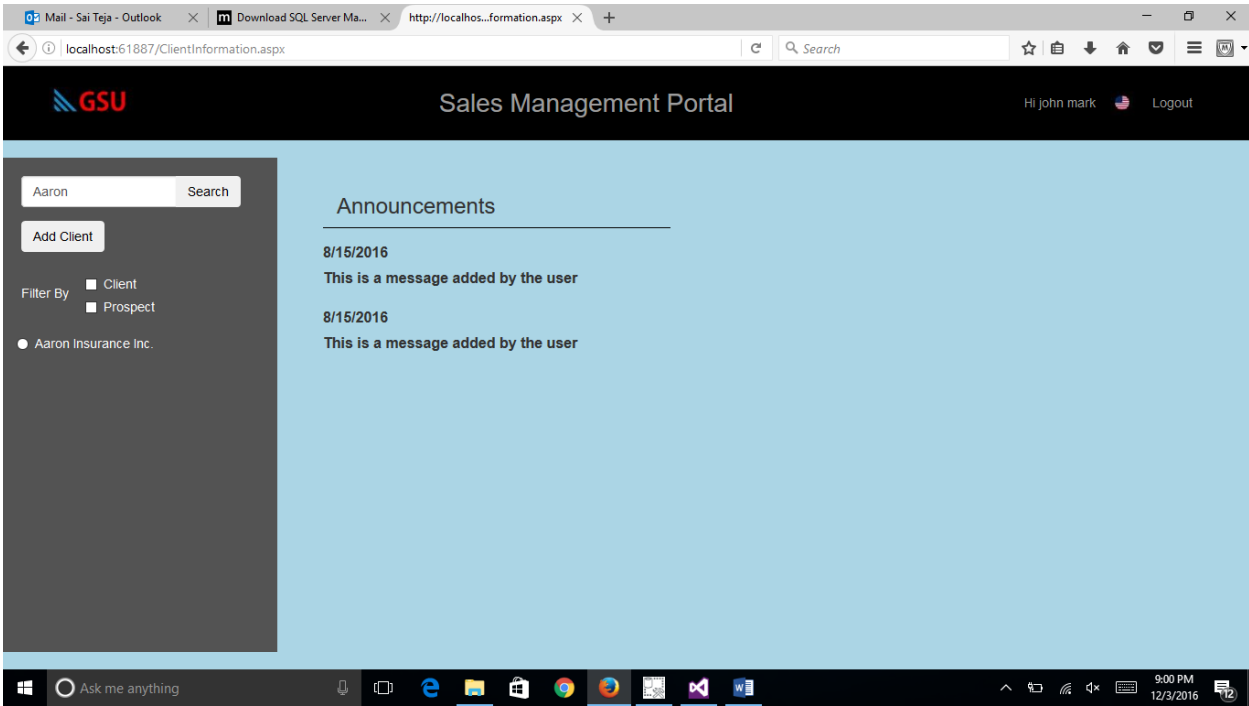


3:



Search Module:





Adding a client:

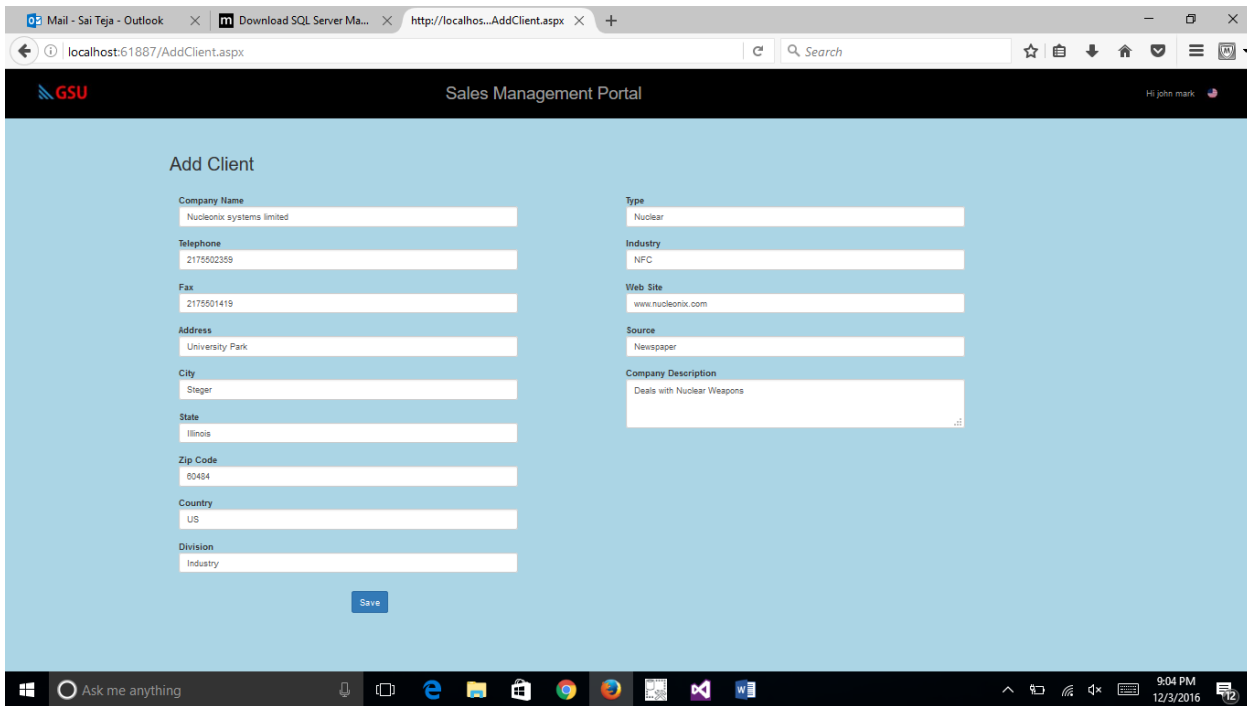
The screenshot shows a web browser window with the URL `localhost:61887/AddClient.aspx`. The page title is "Sales Management Portal" and the user is logged in as "Hi John mark". The main content area is titled "Add Client" and contains a form with the following fields:

- Company Name
- Telephone
- Fax
- Address
- City
- State
- Zip Code
- Country
- Type
- Industry
- Web Site
- Source
- Company Description

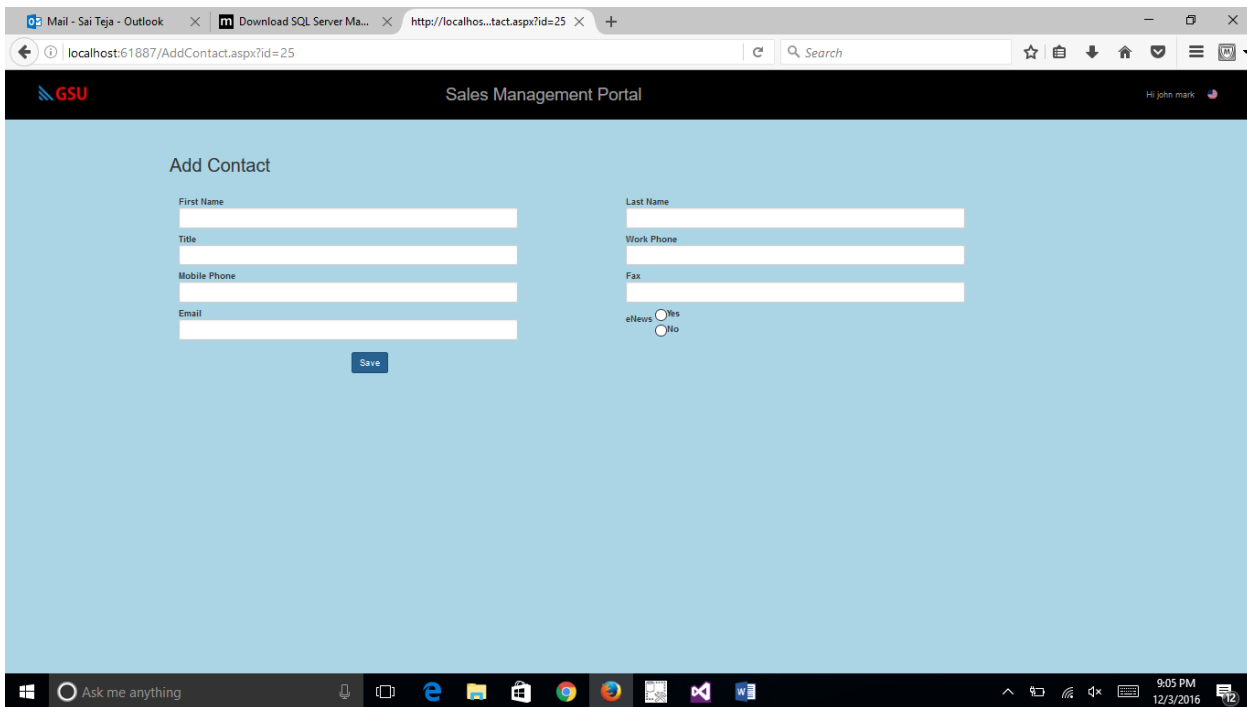
Client Validations:

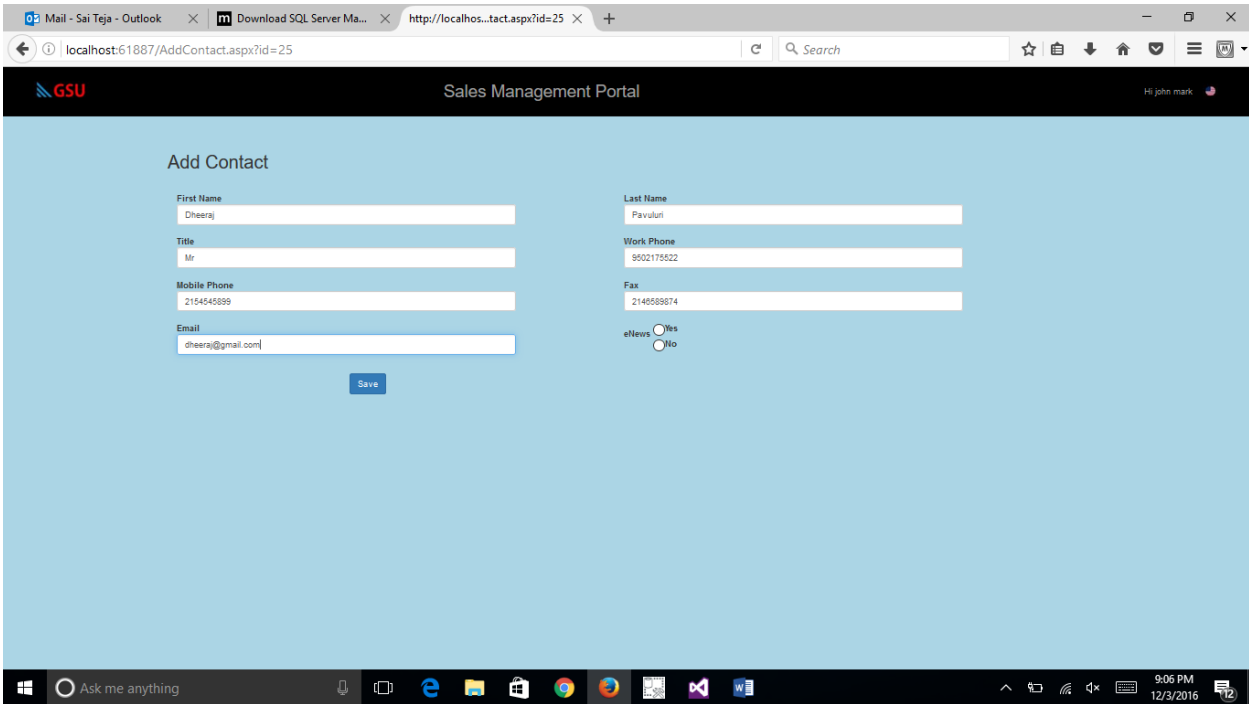
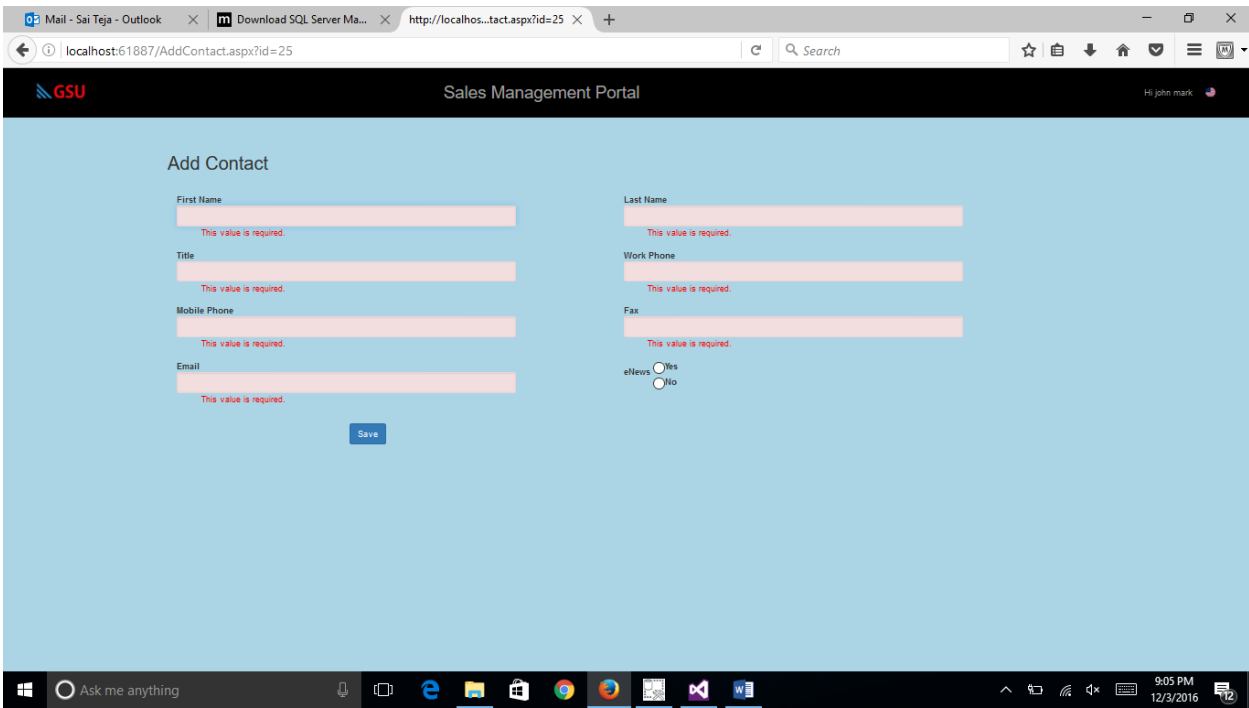
The screenshot shows the same "Add Client" form as above, but now with red error messages below each field, indicating that all fields are required. The error messages are:

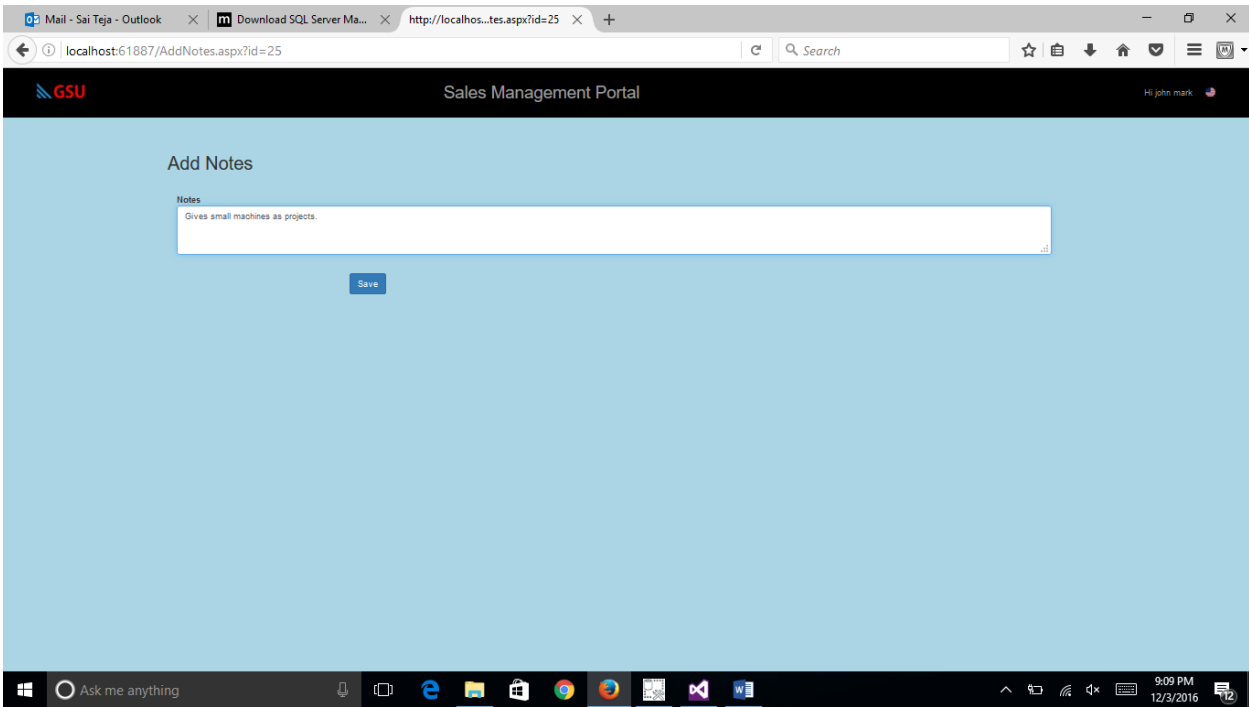
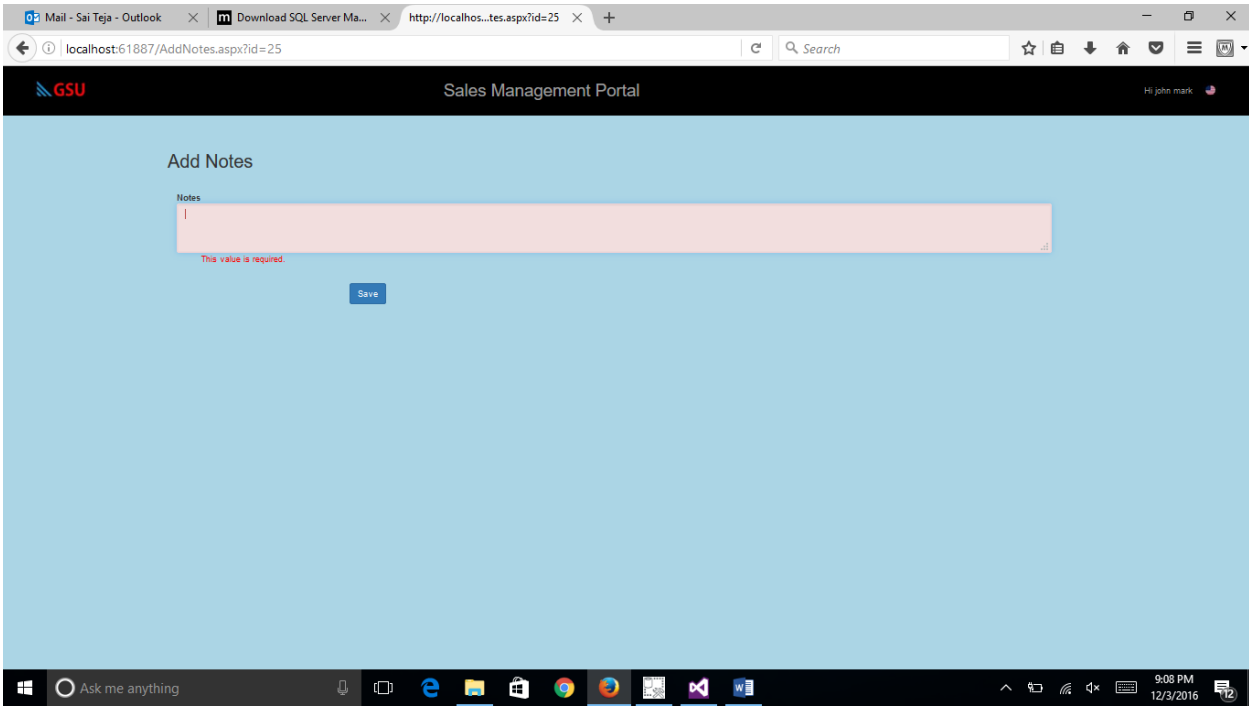
- Company Name: This value is required.
- Telephone: This value is required.
- Fax: This value is required.
- Address: This value is required.
- City: This value is required.
- State: This value is required.
- Zip Code: This value is required.
- Country: This value is required.
- Division: This value is required.
- Type: This value is required.
- Industry: This value is required.
- Web Site: This value is required.
- Source: This value is required.
- Company Description: This value is required.



Client Forms:







Mail - Sai Teja - Outlook | Download SQL Server Ma... | http://localhos...nity.aspx?id=25

localhost:61887/AddOppportunity.aspx?id=25

GSU Sales Management Portal Hi john mark

Add Opporunity

<p>Opportunity Name Rad Check Machine</p> <p>Estimated Budget 2000000</p> <p>Opportunity Type Clear</p> <p>Opportunity Description jbbbbb</p> <p>Contact Telephone 2711521457</p>	<p>Chance to close (percentage) 80</p> <p>Opportunity Duration 10</p> <p>Contact Name Sumana</p> <p>Opportunity Notes jbbbbb</p>
--	--

Save

Ask me anything | 9:10 PM 12/3/2016

Mail - Sai Teja - Outlook | Download SQL Server Ma... | http://localhos...osal.aspx?id=25

localhost:61887/AddProposal.aspx?id=25

GSU Sales Management Portal Hi john mark

Add Proposal

<p>Proposal Name rar meter</p> <p>Chance to close (percentage) 90</p> <p>Proposal Duration 3</p> <p>Total Revenue 500000</p> <p>Contact Name Dheeraj</p> <p>Proposal Description jbbbbb</p> <p>Rejection Reason NA</p>	<p>Account Manager Sardar</p> <p>Estimated Budget 2120000</p> <p>Proposal Amount 500000</p> <p>Proposal Status Pending</p> <p>Contact Telephone 2175502359</p> <p>Proposal Notes jbbbbb</p>
---	---

Save

Ask me anything | 9:12 PM 12/3/2016

Mail - Sai Teja - Outlook x Download SQL Server Ma... x http://localhos...formation.aspx x +

localhost:61887/ClientInformation.aspx Search

GSU Sales Management Portal Hi john mark Logout

- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- New One
- New One
- New One Company
- New One Group
- New Pharmacy
- test
- asdf
- asdf
- asdf
- asdf
- nfc
- Nucleonix systems limited

Announcements

8/15/2016
This is a message added by the user

8/15/2016
This is a message added by the user

Ask me anything 9:12 PM 12/3/2016

Mail - Sai Teja - Outlook | Download SQL Server Ma... | http://localhos...formation.aspx

localhost:61887/ClientInformation.aspx

GSU Sales Management Portal Hi john mark Logout

Filter By Client Prospect

- Aaron Insurance Inc.
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- New One
- New One
- New One Company
- New One Group
- New Pharmacy
- test
- asdf
- asdf
- asdf
- asdf
- nfc
- Nucleonix systems limited

General Info | **Contacts** | Notes | Opportunities | Proposal | Projects

Company Name
Nucleonix systems limited

Telephone
2175502359

Fax
2175501419

Address
University Park

City
Steger

State
Illinois

Zip Code
60484

Country
US

Division
Industry

Type
Nuclear

Industry
NFC

Web Site
www.nucleonix.com

Source
Newspaper

Company Description
Deals with Nuclear Weapons

Ask me anything | 9:13 PM 12/3/2016

Mail - Sai Teja - Outlook | Download SQL Server Ma... | http://localhos...formation.aspx

localhost:61887/ClientInformation.aspx

GSU Sales Management Portal Hi john mark Logout

Filter By Client Prospect

- Aaron Insurance Inc.
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- New One
- New One
- New One Company
- New One Group
- New Pharmacy
- test
- asdf
- asdf
- asdf
- asdf
- nfc
- Nucleonix systems limited

General Info | **Contacts** | Notes | Opportunities | Proposal | Projects

First Name	Last Name	Title	Work Phone	Mobile Phone	Fax	eNews	Email
Dheeraj	Pavuluri	Mr	9502175522	2154545899	2146589074		dheeraj@gmail.com

Add Contact

localhost:61887/ClientInformation.aspx#contacts

Ask me anything | 9:13 PM 12/3/2016

Mail - Sai Teja - Outlook | Download SQL Server Ma... | http://localhost:61887/formation.aspx

localhost:61887/ClientInformation.aspx

GSU Sales Management Portal

Hi john mark | Logout

Filter By Client Prospect

- Aaron Insurance Inc.
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
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- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- Angel Construction LLC
- New One
- New One
- New One Company
- New One Group
- New Pharmacy
- test
- asdf
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- asdf
- nfc
- Nucleonix systems limited

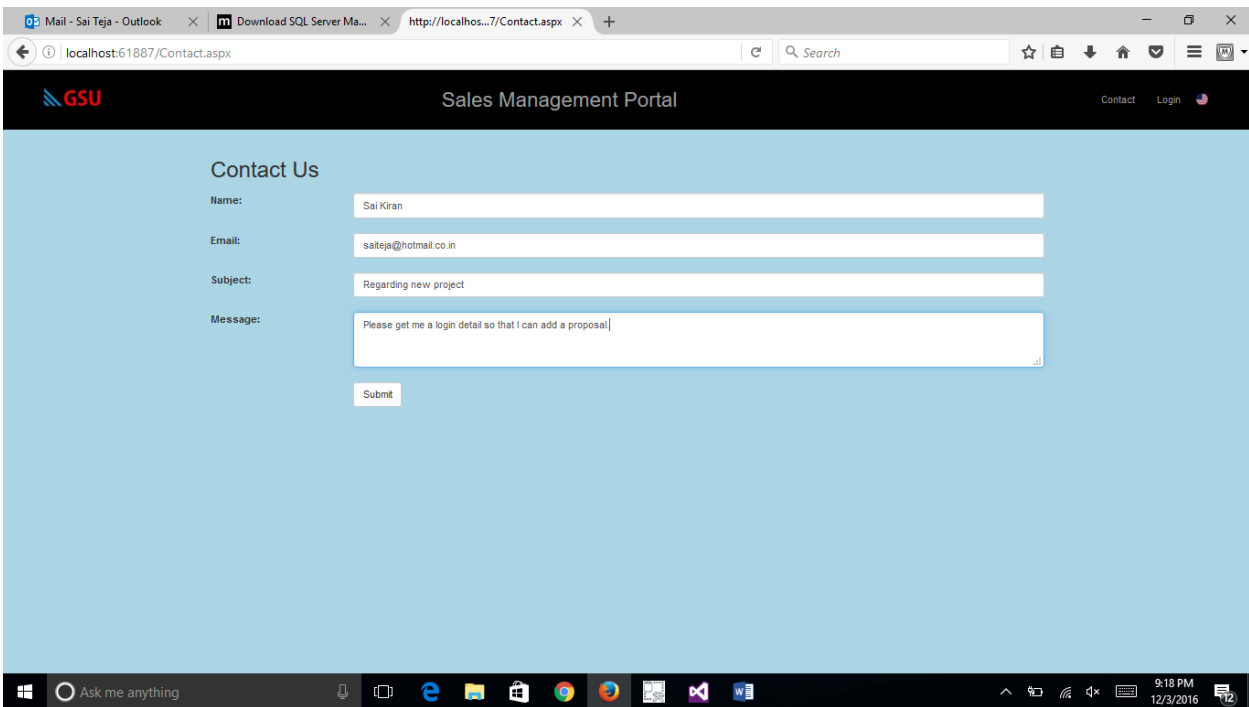
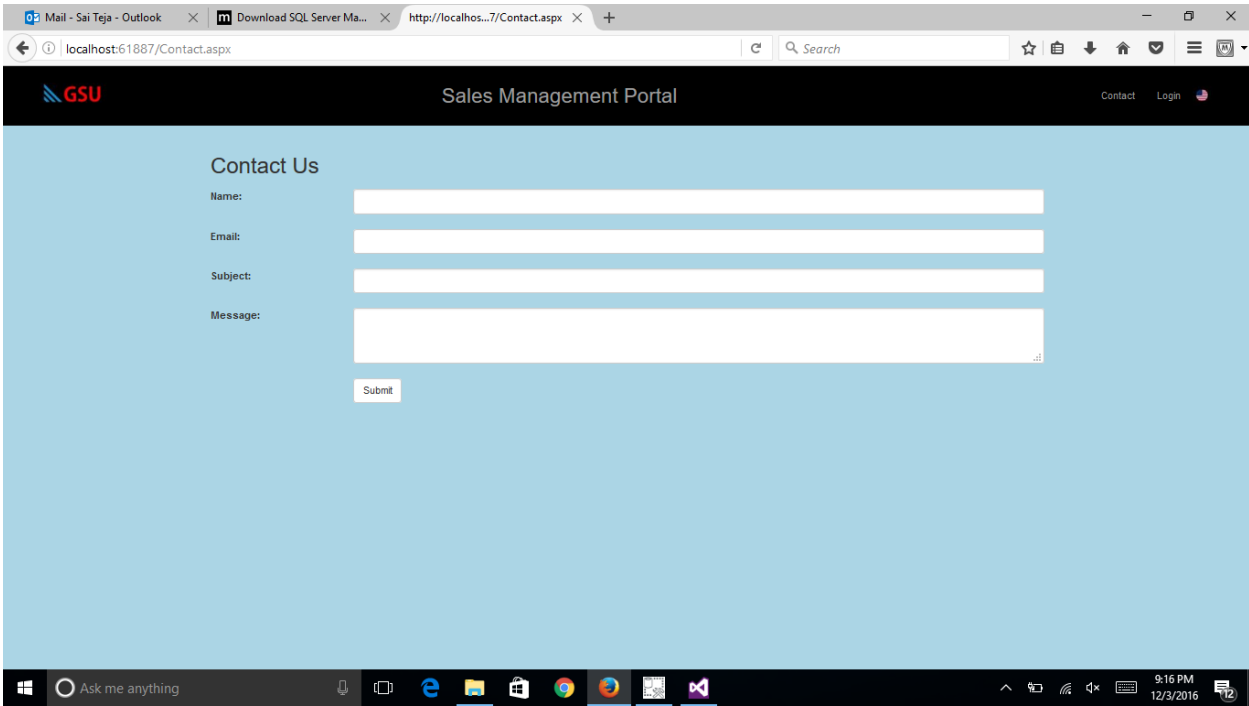
General info | Contacts | **Notes** | Opportunities | Proposal | Projects

Notes

Gives small machines as projects.

Add Notes

Ask me anything | 9:13 PM 12/3/2016



Mail - Sai Teja - Outlook | Download SQL Server Ma... | http://localhost:61887/Contact.aspx

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GSU Sales Management Portal

Contact Us

Name: Sai Kiran

Email: saiteja@hotmail.co.in

Subject: Regarding new project

Message: Please get me a login detail so that I can add a proposal.

Submit

We received your mesgae. We will contact you soon!

Ask me anything | 9:18 PM 12/3/2016