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Fall 2016

Sales Management Portal

Sai Mehana Kaparla Governors State University

Pujitha Penugonda Governors State University

Saikiran Paladugu Governors State University

Srujan Kumar Tirunagari Governors State University

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ABSTRACT

This is a web application which is used to bring both customers and management on to single platform.

Sales management is attainment of an organization's sales goals in an effective and efficient manner through planning, staffing, training & controlling resources. It is a sales pipeline database portal where it can track all the logs of contacts and activities, opportunities, proposals and sometimes projects too. This application tracks all the activities taking place in the pipeline database and also involves in communicating with the staff and other employees. This application has the facility to accept or reject proposals if they do not meet the business needs. We can view the list of prospects and clients in this application. It tracks all the details of each and every transaction occurred and helps in generating reports.

Description:

This application helps to work in an easy and effective way for both management and staff. In this portal, we can add new employees, make announcements to the employees, accept or reject proposals, generate reports .The main aim of this application is employee add a new prospect (i.e) once all the details related to the prospects are filled and submitted to the manager, he decides to accept or reject based on the information provided. Once if the prospect is accepted then it is added to the clients list and project is stated as approved, if not a new prospect has to be developed and resubmitted to the manager.

In this application, there are two different roles which have their own functionalities and privileges. They are:

- Manager
- Employee

Manager:

Managers has the access to add new employees into the database. They can also make announcements for the employees and can generate reports related to recent transactions. Manager has an additional access like once if an employee adds a new prospect into the database only manager can accept or reject the proposals. He views all the information provided related to the prospects and then decides whether to accept or reject. Once the prospects are accepted, then they are approved as clients and are displayed in the clients list. All the lists of the employees and data related to them are available in manager module. Both manager and employees can add clients but only manager has an access to accept or reject. He generates reports and downloads them in **PDF** format for any future purpose.

Employee:

Employee module also works the same but he does not have access to accept or reject any proposal. He can add clients similar to manager and can view the announcements made by the manager. He can search for required clients and can filter based on clients or prospects. Employee follows the guidelines of the manager and works accordingly. All the details filled by the employee related to the client's information must be specific and clear so manager can easily decide whether to accept or reject any proposals.

Technical Requirements:

Operating System : Windows, Linux

Technology : Java
Software : Eclipse
Database : Oracle 11g

Web Server : Tomcat v7 or V8

Client Side Technologies:

HTML/HTML5

- CSS/CSS3
- Java script
- Ajax
- J query

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1 Project Description

Our application's main aim is to develop a portal where sales employees enters client's information into the pipeline by keeping logs of contacts and activities, proposals and eventually projects. This mainly enables management to track the progresses and also helps to interact and provide guidance to staff timely. This application makes it easier for users to navigate on their own devices which is nothing but a mobile friendly application. A manager can make announcements to the employees and has access to accept or reject any proposals. Employees can view all the announcements made by the manager and can follow accordingly. Manager reviews all the information provided by the employees and decides to approve the proposal. He can generate all the reports for a certain period if needed and can also download them. This application is mainly for tracking all the activities performed in the pipeline and makes sure it is stored in the database.

1.1 Competitive Information

Our competitor is Trello which provides a medium for both companies and customers. It helps to organize people's work and personal lives separately. This helps to visualize a project from top to bottom and can communicate with the team members instantly and helps our inbox to be empty. Helps to manage everything from large sales team to website redesigns to anything in between. It is flexible to use anywhere and is simply structured. In real time, it helps to have all the projects at one place on any device. We are trying to give a better functionalities to the users and are trying to provide them with better and simple user interface.

1.2 Relationship to Other Applications/Projects

Our project takes help of other applications like sales force and Repsly, to manage clients and captures information in real time. Sales force helps to run all the business through phones, closes deals and delivers customers service immediately. We use Repsly to add new clients and to rack its activities.

•

1.3 Assumptions and Dependencies

For this project we assume that all users who use this application can understand English and aware of the use of the project.

Our project is used for the organizations which handle different number of clients working with them on different modules where we can find all the fields of the work where we can make sure the requirement is delivered to client or not. And here we can manager can have all the details of the project status and reports can be generated.

1.4 Future Enhancements

As the technology is advancing very rapidly in these days we are planning to keep up with the advancement. We plan in adding more capabilities. We are planning to give access to the users to get the reports which can be permissible to view for the client. We plan to increase the efficiency of the website. And finally, mobile application of our website which can do many things which a website cannot do like, interaction with the mobile maps, An website can only send a mail notifying the status of the project the user which is available to the user at all the time. A mobile application can communicate with other applications for a better service to the user for example a mobile application can connect with the connected devices which user have like smart watch, Bluetooth devices, and video sharing devices which a website cannot do it.

1.5 Definitions and Acronyms

GSU- Governors State University NFR- Non Functional Requirements

2 Project Technical Description

In our project, we are going to develop a Web application named GSU Sales Management Portal. With this portal, we are going to provide service for organizations where they handle different types of clients and of different requirement. In this application all the employees can get data of the clients and enter into the database. Managers of the organization can see the details of the clients and we also have other user of the application i.e. the manager who is to manage all works of the organization and he has all control of the website. He can create and update an employee as well as customer or clients. It helps for internal use of the organization. Where we can get the reports of the project by weekly and monthly in pdf format. Employees can be either project managers or sales people.

Here we found out some designing principles to ensure our design meets the desired architecture.

- 1)This application should be good enough to serve if there is heavy load and should be good in functionality if we add any further improvisations to it.
- 2) Application should support more functionalities in future without effecting the major functionality.
- 3) It has to support all the standards of the regular web application. We have developed this application in Java where it follows all application principle in java like J2EE, Springs, Servlets and so on.
- 4) This application should work in all the devices like PC, tablet or Mobiles without effecting functionality

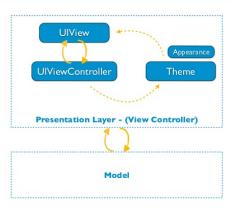
To fulfill all the goals and to meet all the requirements for this application, we are following the process of Gathering the requirements, validating them, making design fulfilling the requirements and implementing the project according to the design and Verifying the application performance and Efficiency.

2.1 Application Architecture

In this project the Application architecture is primarily divided into three major components enforcing Spring MVC Model for our application. In the Spring MVC model application front end components are been divided from the Business layer. In this case the services will not be combined for UI Components and Data base components. We are using a Three-tier architecture. It is one of the basic paradigms of software development. This design pattern can be beneficially used in web integration projects, as a basis for the overall solution architecture, with benefits.

Presentation Layer: In the layer plays a main role in interactions with operations, gathering information and user friendly format. It is responsible for all actions done user interface. It is said as a client side server as the when a user reaches our application on the web browser all the HTML pages will work on the client side. To reduce the efforts on service layer java script components and validations are done in this layer.

Presentation Layer

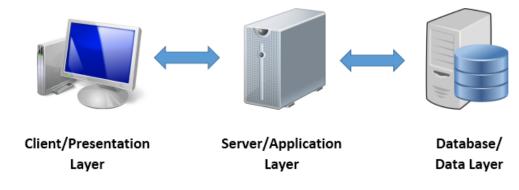


Service Layer:

In this layer, all the communications are managed by the session to the end users Session-layer, all the validation components, session components and Interface components are present in session layer Services of Session-layer are basically utilized in application environments that make use of remote procedure calls (RPCs).

Data Access Layer:

Data access layer makes use of Java Data Base associations with interface with Database and the Methods of our application. With this procedure, it would decrease the complexity of getting the information shape different information documents with having any effect on our strategies and classes of the Service Layer.



2.2 Application Information flows

In the GSU sales management portal we find the one link on top left of the screen. By clicking on that link we directly enter the login page where the manager and employee only can login with valid Id and Password. But the manager and employee has different home page.

Manager Portal:

In this Manager home page, we have three options as following

- > Search bar: where the manger can search for clients by their names.
- Add Client: Can add the new employee, clients and their total information.
- Filter: Using this option manger can filter the clients and the prospects as per his requirements.

On the other hand, on the right side we have a drop down list of seven options under Manager Account.

- 1. Home: When the manger select the home, this take him to home page.
- 2. Add Employee: Here the manger can add a new employee creating his employee id, employee name, contact number, employee password and employee address.
- 3. All Employee List: When this option is selected, the manger can view all the employee list and check with the updates of employees who are active and who are inactive
- 4. Reports: by clicking the reports it will take us to the report generation page where we have three options and a generate button.
 - Report type: In type, we have three categories opportunities, proposals and projects.
 - From Date: we can select the starting date of the projects in month or yearly
 - To date: Here we must select the end date of the required field
 By clicking the generate button a report will be generated in PDF format from date to
 end date. We can view the projects or proposals in a list format we can also print or
 download the PDF file.
- 5. Announcements: Here the Manager can post add Announcements regarding the business updates to the employees.
- 6. Change password: The manager can enter the old password and create a new password
- 7. Logout: Manager can quite the page by selecting Logout option.

When a client is selected the client's, total information will be displayed. Here in Manger portal the manger can view general info, contacts, notes, opportunities, proposal, projects and take the decisions on validation. The main role of Manger is he only can accept or reject the client's proposals and projects. The employee will just take the details of client's proposals and forward it to the manager for approval. In this portal, we can also generate a report by selecting the report type and dates by clicking the generate option.

Employee portal:

The Employee can login from the login page with valid employee ID and password. Same as in Manger portal we have search filter and add client options available in the employee portal. Employee can add the client and client details and can view the announcements made by the manager regarding the projects and proposals and can make notes.

2.3 Interactions with other Projects (if Any)

In our project, they are no any interaction with other projects.

2.4 Interactions with other Applications

Our Application will not interact with any Applications.

2.5 Capabilities

This project has privileges like Manager can inactive the employees who are out of his business so that the inactive employee can't login to the portal. Due to security purpose of the business the management is only adding the clients after his visit to the company impersonal. Manager role has most permissions in application like accessing DB, accepting projects, making announcements posted. Approving requests, sending responses to enquiries, adding new features to application.

2.6 Risk Assessment and Management

In this project, we have a risk of crashing of the database if many users access the database at a time. If we use high level of code, there may be chance of code crashing while updating. Deployment issues can also be occurred while deploying updated project. There are tools available in market to handle these issues. We can estimate the risk depending on application demand in market. Analyzing all these aspects in functionalities, knows how efficiently application works. User details may be lost because it is encrypted with low level encryption technique.

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 User-Capability-000101>

The project must allow new clients to be added, updated, or deleted by the users. The client fields includes General info, contacts, Notes, Opportunities, Proposal and Projects.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000102>

The project must allow login to both manager and employee. It should check the credentials and makes sure both are correct.

Implementation: Mandatory

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

The project must keep user signed in until session gets expired or logged out

Implementation: Mandatory

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

The project must be able to browse all the existing clients

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000105>

The manager must be able to filter by client or prospects category.

Implementation: Mandatory

<GSU-GS_SU2016-1 User-Capability-000106>

The project must be able to add a new client.

Implementation: Mandatory

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

The project must be able to add a new employee in the manager module.

Implementation: Mandatory

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

The project must contain all the lists of the employees in manager module.

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

The project must contain announcements made by the manager to the employees.

Implementation: Mandatory

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

The Manager must be able to generate reports for particular period of time and must be able to save them

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000111>

The project must be able to add all the information related to clients general info like company name, country, telephone, division, fax, type, address, industry, city, website, state, source, zip code, company description.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000112>

The project must be able to update all the information related to clients general info like company name, country, telephone, division, fax, type, address, industry, city, website, state, source, zip code, company description.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000113>

The project must be able to add a contact in the clients information

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000114>

The project must be able to add all the information related to clients contacts like first name, Last name, Title, work phone, mobile phone, fax, e news, email etc.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000115>

The project must be able to add notes in the client's information table and must be able to view it

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000116>

The project must be able to add all the information related to clients opportunities like opportunity name, change to close, estimated budget, opportunity duration, type, contact name, contact telephone, opportunity description and notes.

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000117>

The project must be able to update all the information related to clients opportunities like opportunity name, change to close, estimated budget, opportunity duration, type, contact name, contact telephone, opportunity description and notes.

<GSU-GS_SP2016-1 User-Capability-000118>

The project must be able to add all the information related to clients proposal like proposal name, account manager, change to close, estimated budget, proposal duration, proposal amount, total revenue, contact name, contact telephone, proposal description, proposal notes.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000119>

The project must be able to update all the information related to clients proposal like proposal name, account manager, change to close, estimated budget, proposal duration, proposal amount, total revenue, contact name, contact telephone, proposal description, proposal notes.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000120>

The manager must be able to accept or reject the proposals after employees submit the clients details.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000121>

The project must automatically update all the details of the project in the projects table once the manager accepts it.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000122>

The project must be able to view the details of the project like project name, project manager, project amount, total revenue, project duration, status, launch date, contact name, telephone, project description, project notes etc.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000123>

In the projects table, launch date must be filled after the project is accepted by the manager,

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000124>

The project must be able to change passwords for manager and employees and should get updated in the database.

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000125>

The employee must be able to search by client or prospects category.

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000126>

The employees must be able to view all the announcements made by the manager.

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000127>

The project must be able to view all the prospects list when filtered by prospects button.

<GSU-GS_SP2016-1 User-Capability-000128>

The project must be able to view all the clients list when filtered by clients button.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000129>

The project must be able to display all the data related to general info page once submitted.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000130>

The project must be able to display all the data related to contacts page once updated.

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000131>

The project must be able to display all the data related to notes page once updated.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000132>

The project must be able to display all the data related to opportunities page once updated.

Implementation: Mandatory

<GSU-GS_SP2016-1 User-Capability-000133>

The project must be able to display all the data related to proposals page once updated.

Implementation: Mandatory

<GSU-GS SP2016-1 User-Capability-000134>

The project must be able to display all the data related to projects page once updated.

Implementation: Mandatory

DB Requirements:

<GSU-GS SP2016-1 DB-Capability-000100>

The project must have a DB table to save the details of manager

Table Requirements: m_id, m_emp_id, m_name, , m_password, m_department

Implementation: Mandatory

<GSU-GS SP2016-1 DB-Capability-000101>

The project must have a DB table to save the details of all employees

Table Requirements: e id, e emp id, e name, e contact number, e email id, e password, e address,

status

<GSU-GS SP2016-1 DB-Capability-000102>

The project must have a DB table to save the details of all clients

Table Requirements: client id, client name, client type, g info id, o id, p id, proj id

Implementation: Mandatory

<GSU-GS SP2016-1 DB-Capability-000103>

The project must have a DB table to save the details of all the announcements

Table Requirements: a id, m id, a date, a data

Implementation: Mandatory

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

The project must have a DB table to save the comments

Table Requirements: cmt_id, m_id, staff_id, comment, cmnt_type

Implementation: Mandatory

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

The project must have a DB table to save the list of contacts

Table Requirements: contact_id, client_id, first_name, last_name, title, work_phone, mobile_phone,

fax, enews, email, status Implementation: Mandatory

<GSU-GS SP2016-1 DB-Capability-000106>

The project must have a DB table to save the general info of the clients

Table Requirements: client_id, company name, country, telephone, division, fax, type, address,

industry, city, website, state, source, zip code, company description.

Implementation: Mandatory

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

The project must have a DB table to save all notes

Table Requirements: n id, client id, notes, notes date, status

Implementation: Mandatory

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

The project must have a DB table to save the lists of all the opportunities

Table Requirements: like o id, client id, opportunity name, change to close, estimated budget, opportunity duration, opportunity type, contact name, contact telephone, opportunity_description.

Implementation: Mandatory

<GSU-GS SP2016-1 DB-Capability-000109>

The project must have a DB table to save the lists of all projects

Table Requirements: project_name, project_ manager, project_amount, project_duration, status, launch date, contact name, telephone. project description. project_notes,pro_id, client_id etc.

<GSU-GS SP2016-1 DB-Capability-000110>

The project must have a DB table to save the lists of proposals

Table Requirements: p_id, client_id, proposal_name, account_ manager, change _to _close, estimated_ budget, proposal_ duration, proposal _amount, total _revenue, contact _name, contact _telephone, proposal _description, proposal _notes, date_added, rejection_reason, proposal status.

Implementation: Mandatory

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

GSU-GS SP2016-1 Admin-Capability-000100>

The project must allow manager to add a new employee.

Implementation: Mandatory

<GSU-GS SP2016-1 Admin-Capability-000101>

The project must allow manager to update the details of new employee

Implementation: Mandatory

<GSU-GS_SP2016-1 Admin-Capability-000102>

The project must allow manager to delete an employee

Implementation: Mandatory

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

The project must allow manager to login . It should check the credentials and makes sure they are correct.

Implementation: Mandatory

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

The project must keep manager signed in until session gets expired or logged out

Implementation: Mandatory

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

The manager must be able to browse all the existing clients

Implementation: Mandatory

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

The manager must be able to filter by client or prospects category.

Implementation: Mandatory

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

The manager must be able to view all the lists of the employees.

Implementation: Mandatory

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

The project must allow manager to make announcements to the employees.

<GSU-GS SP2016-1 Admin -Capability-000109>

The Manager must be able to view all the details of particular client like General info, contacts, Notes, Opportunities, Proposal and Projects.

Implementation: Mandatory

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

The Manager must be able to generate reports for particular period of time and must be able to save them in pdf format.

Implementation: Mandatory

<GSU-GS_SP2016-1 Admin -Capability-000111>

The Manager must be able to accept the proposals submitted by the employees.

Implementation: Mandatory

<GSU-GS SP2016-1 Admin -Capability-000112>

The Manager must be able to reject the proposals which does not meet the requirements of the customers.

Implementation: Mandatory

<GSU-GS_SP2016-1 Admin -Capability-000113>

The project must allow manager to logout of the session.

Implementation: Mandatory

3.3 Security and Fraud Prevention

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

The project must allow password of the manager to be encrypted in the database.

Implementation: Mandatory

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

The project must allow password of the employee to be encrypted in the database.

Implementation: Mandatory

<GSU-GS_SP2016-1 SFP -Capability-000102>

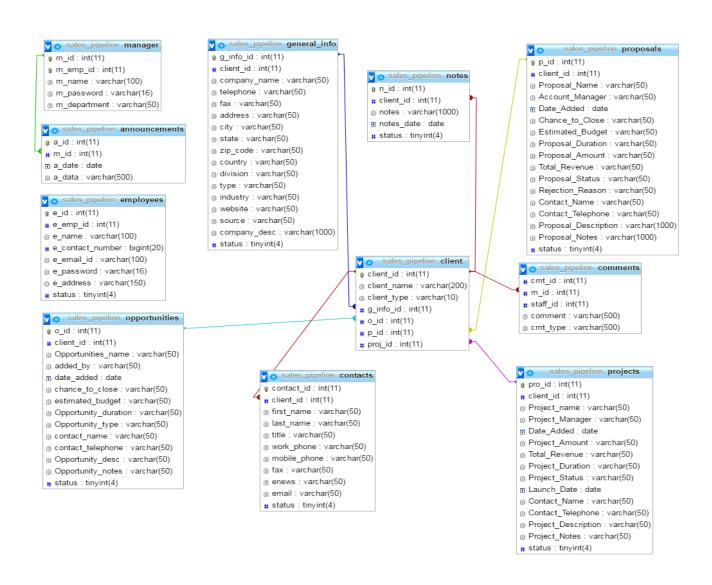
The project must allow to block all unidentified and malware attacks.

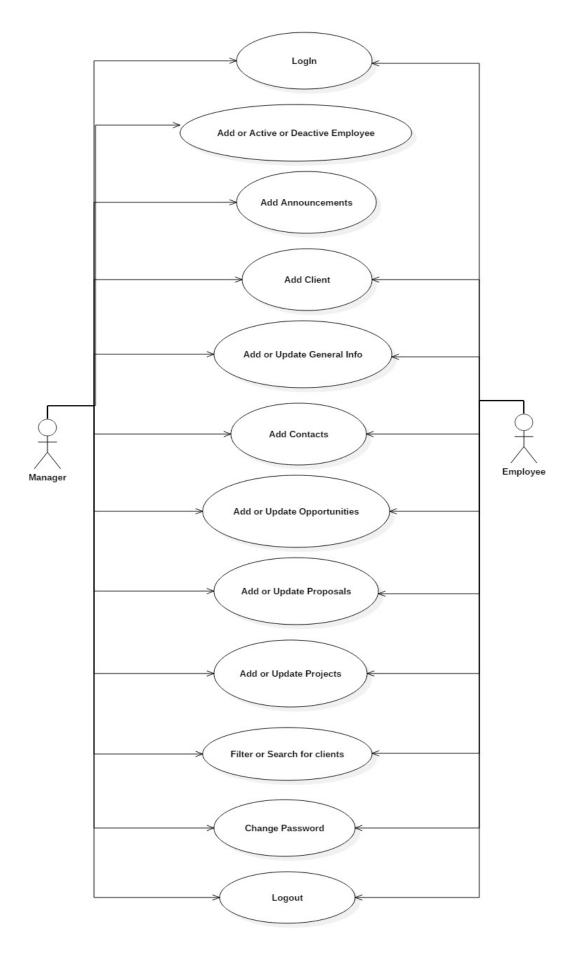
3.4 Release and Transition Plan

Once the project is developed, then it is verified and checks whether it meets all the business and functional requirements. After that application is tested and is moved to the production environment. Once it passes the production environment the functionality is checked in real time environment. This process rotates like a cycle until customer gets satisfied with the design and issues a release date to the application.

4 Project Design Description

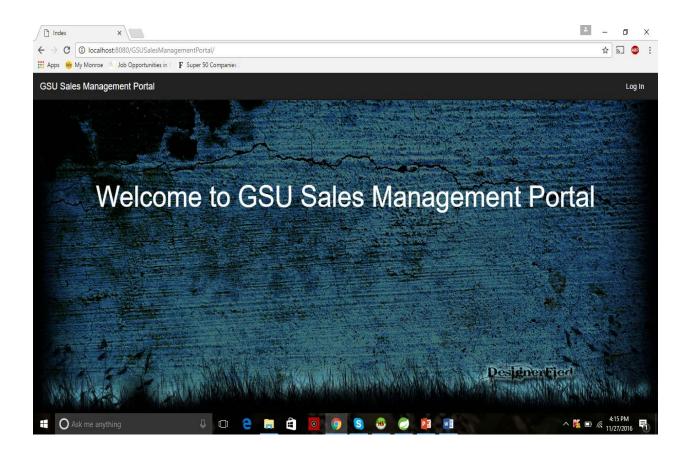
Database Design:



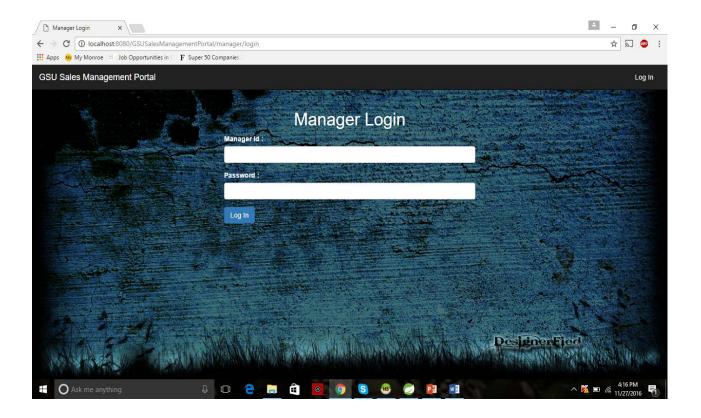


5 Internal/external Interface Impacts and Specification

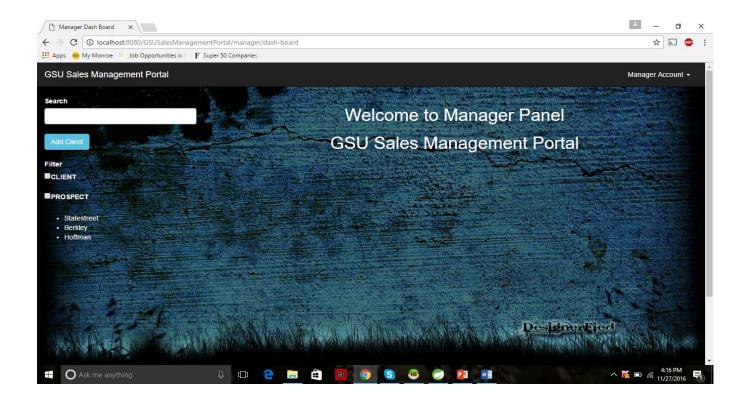
Index page:



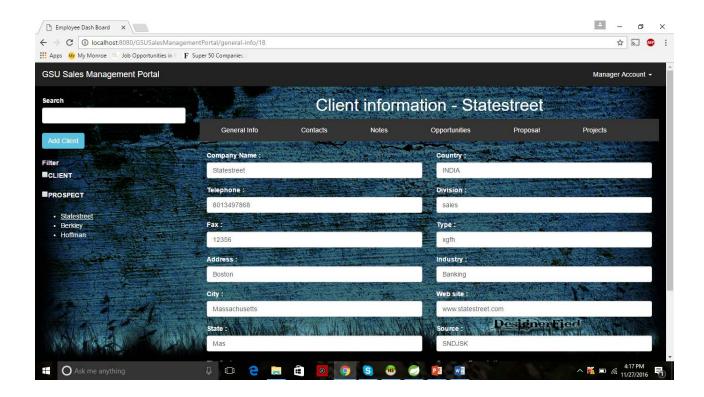
Manager Login:



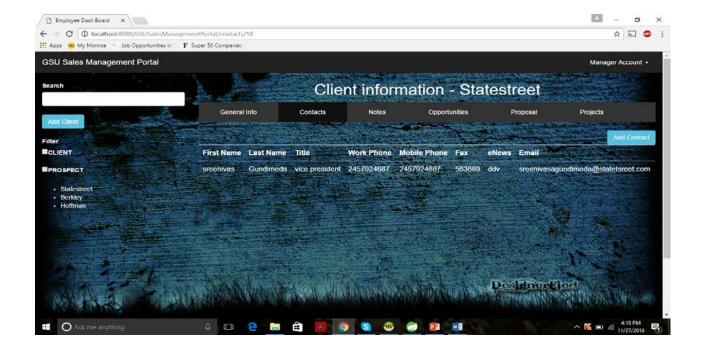
Home page:



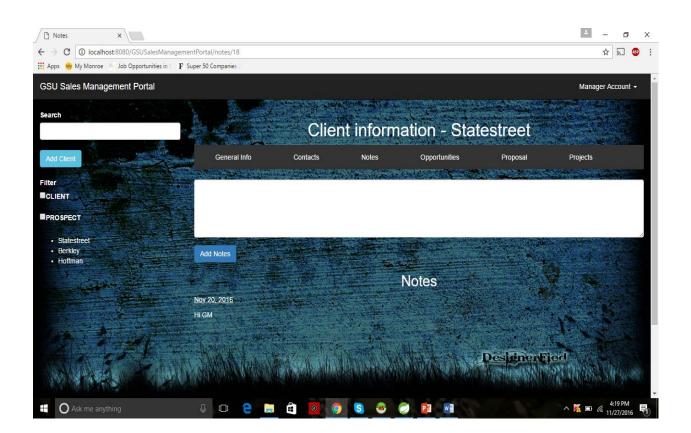
General info of client:



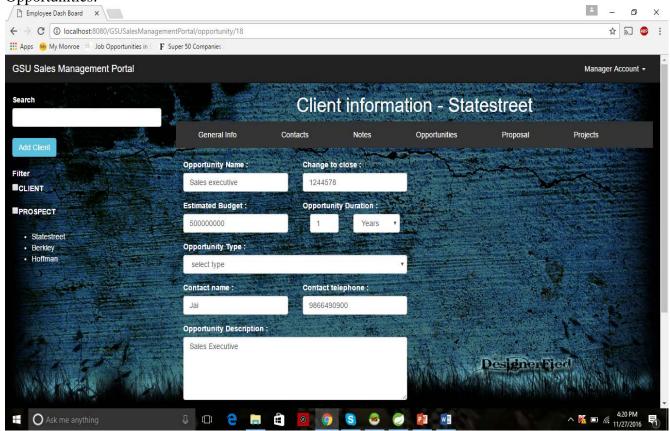
Contacts Page:



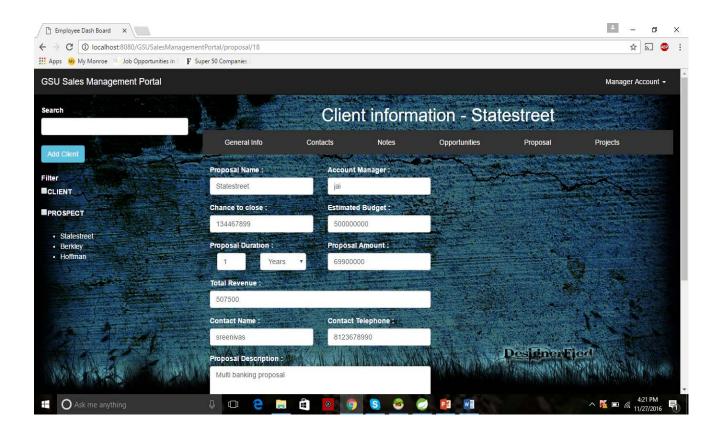
Notes:



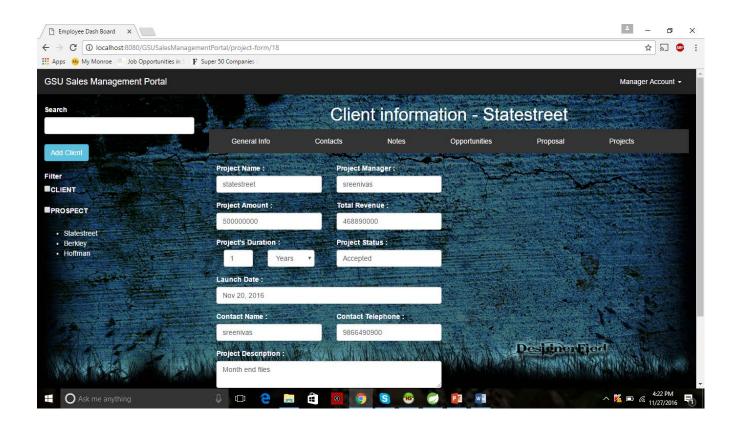
Opportunities:



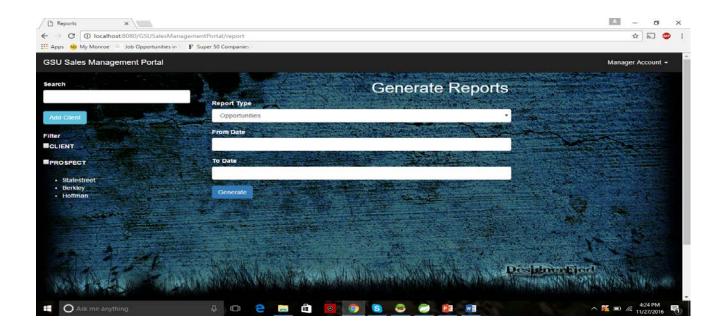
Proposals:



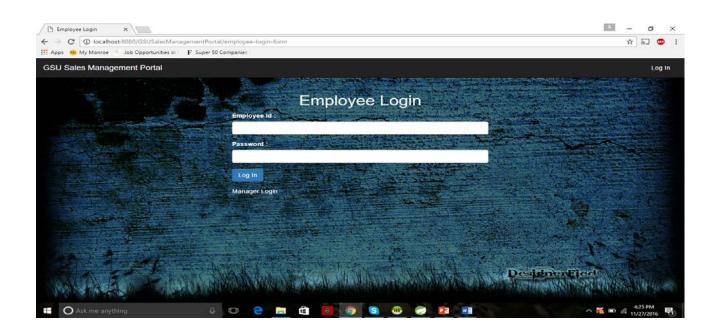
Projects:



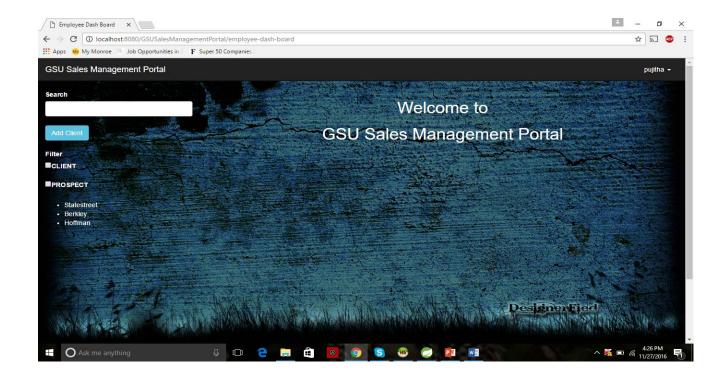
Generating Reports:



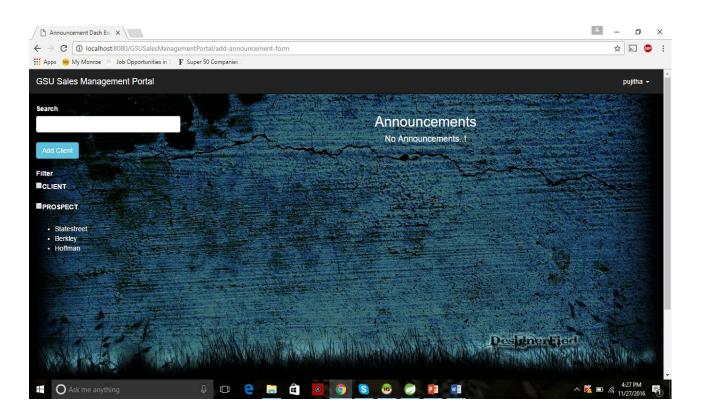
Employee login:



Home page:



Announcements:



6 Design Units Impacts

6.1 Functional Area A/Design Unit A

As this is a newly developed project there won't be any design unit impacts on other parts of the project.

7 Open Issues

This section should be part of the document only when the document is in a draft form

8 Acknowledgements

We acknowledge our professor Do Young Park who guided us in the development of the project.

9 References

All references should include, author, title of document, doc ID# and issue date.

10 Appendices

List all appendixes here.