Gensuite Website with Business Request Subscriber Tool & Recruiter Management Application

By

Roli Singh

Submitted to
the Faculty of the Information Technology Program
in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Science
in Information Technology

University of Cincinnati
College of Engineering & Applied Science

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&
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# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgements</td>
<td>i</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>ii</td>
</tr>
<tr>
<td>List of Figures</td>
<td>iii</td>
</tr>
<tr>
<td>Abstract</td>
<td>v</td>
</tr>
<tr>
<td>1. Project Description and Intended Use</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Gensuite's Challenges</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Proposed Solution</td>
<td>3</td>
</tr>
<tr>
<td>1.3 User Profile</td>
<td>5</td>
</tr>
<tr>
<td>2. Design Protocols</td>
<td>6</td>
</tr>
<tr>
<td>2.1 Gensuite Website with Business Request Subscriber Tool</td>
<td>6</td>
</tr>
<tr>
<td>2.2 Recruiter Management Application</td>
<td>9</td>
</tr>
<tr>
<td>2.3 Technical Details</td>
<td>12</td>
</tr>
<tr>
<td>2.3.1 Hardware Requirements</td>
<td>12</td>
</tr>
<tr>
<td>2.3.2 Software/Languages Requirements</td>
<td>13</td>
</tr>
<tr>
<td>2.3.3 Database</td>
<td>13</td>
</tr>
<tr>
<td>2.3.4 Interface Design/Navigation</td>
<td>14</td>
</tr>
<tr>
<td>2.3.5 Icons/Graphical Symbols</td>
<td>15</td>
</tr>
<tr>
<td>2.3.6 Color Scheme</td>
<td>15</td>
</tr>
<tr>
<td>3. Deliverables</td>
<td>15</td>
</tr>
<tr>
<td>4. Project Planning</td>
<td>17</td>
</tr>
<tr>
<td>4.1 Timeline</td>
<td>18</td>
</tr>
<tr>
<td>4.2 Budget</td>
<td>19</td>
</tr>
<tr>
<td>5. Proof of Design</td>
<td>20</td>
</tr>
<tr>
<td>5.1 Prototype</td>
<td>20</td>
</tr>
<tr>
<td>5.1.1 Gensuite Website</td>
<td>20</td>
</tr>
<tr>
<td>5.1.2 Business Request Subscriber Tool</td>
<td>25</td>
</tr>
<tr>
<td>5.1.3 Recruiter Management Application</td>
<td>29</td>
</tr>
<tr>
<td>6. Testing</td>
<td>39</td>
</tr>
<tr>
<td>7. Conclusions and Recommendations</td>
<td>41</td>
</tr>
<tr>
<td>7.1 Conclusion</td>
<td>41</td>
</tr>
<tr>
<td>7.2 Recommendations</td>
<td>42</td>
</tr>
<tr>
<td>References</td>
<td>43</td>
</tr>
</tbody>
</table>


**List of Figures**

Figure 1. Flow Chart for Business Request Subscriber Web Tool 8

Figure 2. Use Case Diagram for Business Request Subscriber Web Tool 9

Figure 3. Flow Chart for Recruiter Management Application 11

Figure 4. Use Case Diagram for Recruiter Management Application 12

Figure 5. Layout of the database tables and related columns 14

Figure 6. Timeline of the Project 19

Figure 7. Budget of the Project 20

Figure 8. Header of Gensuite website 21

Figure 9. Home page of Gensuite website 21

Figure 10. Why Gensuite webpage of Gensuite website 22

Figure 11. Products/services webpage of Gensuite website 23

Figure 12. About Us webpage of Gensuite website 24

Figure 13. Contact Us webpage of Gensuite website 25

Figure 14. Assigned action items at Apptacking 26

Figure 15. Update or Reassign Action item to other team members 27

Figure 16. Auto-generated email to requester upon request submission 28

Figure 17. Auto-generated email to marketing team upon request submission 28

Figure 18. Career webpage of the Gensuite website 29

Figure 19. View Job Details webpage at Gensuite website 30

Figure 20. Apply Job webpage at Gensuite website 31

Figure 21. Auto-generated email to applicant upon job application submission 32

Figure 22. Auto-generated email to hiring team upon job application submission 32

Figure 23. Admin webpage to search jobs and add job positions 33
Figure 24. Add job webpage allow to add job positions 34
Figure 25. Edit job webpage allow to edit job positions 35
Figure 26. Internal job search webpage allow to search job positions 36
Figure 27. Application list for applied job position 37
Figure 28. View applicant’s details 37
Figure 29. Internal Business Requests search webpage to search requests 38
Figure 30. View submitted Business Requests’ details 38
Abstract

*Gensuite Website with Business Request Subscriber & Recruiter Management Application* is an interactive web based project designed in the ColdFusion environment. The Gensuite website is designed to describe and promote Gensuite products and services to a global audiences and interested potential clients. The website promotes to increase their marketing needs and expend their business on global basis. The Business Request Subscriber Tool provides an easy method for potential clients to contact Gensuite 24/7 days each week and make sure their requests are being taken care on timely manner. The Recruiter Management Application provides simple process for job seekers to search open job positions at Gensuite website, view job details, apply jobs and upload resume. It provides easy system to administrate; such as, add, edit, archived job positions and view applicants details, their resume and update applicant’s status. This project solves many of Gensuite’s challenges and provides expandability for future growth.
Gensuite Website with Business Request Subscriber Tool & Recruiter Management Application

1. Project Description and Intended Use

R. Mukund owns a small company called Gensuite based in Cincinnati, OH. Gensuite, previously called GE PowerSuite, originated as one of GE’s industrial businesses in 1997. It was renamed to Gensuite LLC in 2008, and got separated from GE Corporate in 2010. Gensuite provides on-line non-downloadable software development tools that digitized business management processes to allow individual operations to own, track and manage their Environment, Health & Safety (EHS) data and monitor their performance in real-time to meet Corporate EHS expectations and legal compliance requirements.

Gensuite had their own internal websites but they never had any external website because it was owned by GE Corporate and GE had provided all the necessary services. But since, Gensuite stood as owned business; it needed to have external website for potential clients who are interested to take advantage of services provided by Gensuite. Also Gensuite required to have their own Recruiter Management Application through which interested job seekers can apply for open positions at Gensuite. Before developing this project, Gensuite had no Recruiter Management Application to display their open positions.

1.1 Gensuite’s Challenges

Gensuite did not have any website presence which describes their products and services. Being without a website, Gensuite was still in the business community, but ultimately it was very frustrating if people hear of the Gensuite’s services by word of
mouth and then they were not able to access much information about them. In these busy
days and ages, people don't always want to or have the time to call and make inquiries as
they often have to go through voice mail and leave a message and then when the business
gets back to them it is not always at a convenient time. In the end they may give up and
lose business. These days, computers are the tools most used by everyone, and at the end
of the day, it is very frustrating if they are not able to find their related information on
Internet.

There is no point of having a website, if there is no way for visitors and interested
clients to communicate with business. Gensuite had also thought to provide ability for
visitors and interested clients to contact Gensuite via their website. But at the same time,
they just did not want to provide a simple form to contact them or provide “Contact Us”
page linked to email or phone where they cannot track the status of received
requests/inquires. They would like to have a capability to track their status and log an
action item to appropriate team members and notify their supervisors once an action item
has been assigned to a team member. This whole project of developing the Gensuite
website and creating business subscriber request form was the first part of senior design
project.

The second phase of this project was developing Recruiter Management
Application. The recruitment of employees was an important practice for any business
and it was increasingly being carried out online. In 2004 almost 28% of 14-64 years old
people used the web to research the employment market and look for open job positions.
In the near future over 50% of recruitments are expected to be result of an online job
posting (3). Before this project completed, Gensuite was using third party, such as Tek
Systems, Granite Inc & Softek as for the recruiting purpose who try to find right
candidates for any open positions. In 2010, they have hired ~20 employees; includes Product Management, Service Delivery & Team Operations. It was very expensive as Gensuite pays 40% of new hire’s income to these recruiters to find right candidate for the open positions. They felt it was necessary to have their own recruiter web application through which they can search for right candidates.

As a summary, Gensuite faced a number of Information Technology challenges, such as:

- No external web presence describing their products and services
- No standard way for potential clients to contact Gensuite for inquires
- No standard way to track these received requests/inquires
- No online place to post open positions

Due to these challenges, Gensuite had many issues, such as:

- Time consuming to track and answer inquires received via phone or email due to manual process
- Requests/inquires get lost or not being taken care on timely manner
- Use the party recruiters which was very expensive to company
- Did not get a right candidates for any open positions

Gensuite seriously wanted to outcomes from these issues and they were looking forward for any solutions.

1. 2 Proposed Solution

As discussed about not having Gensuite external website, Mr. Mukund had expressed an interest in developing dynamic Gensuite website to promote their products, services, teams and other important information about Gensuite. He stated that by having a website, Gensuite can show its customers that it meets current visibility standards,
which was quite prominent these days. Mr. Mukund felt that computers are the tools most used by customers, so it is very important that Gensuite modernized to market the business (6). The most important reason to design a website for Gensuite was that they can promote their services to a global audience and interested/potential clients can communicate with them.

In 2010, Gensuite’s clients were GE, Heico, Houghton, Iberdrola, Morph Detection, MPM, Penske and SABIC. In order to extend their business, Gensuite needed to provide their services to more businesses and clients. Developing website will definitely allow them to expend their business. Having a website will allow their potential customers to read all about Gensuite 24/7 days each week and decide if they want to use Gensuite’s services. Having a website will give their company a professional, polished look and enables potential clients to see their services at a glance.

The idea of developing the business request subscriber web tool also came up as they did not want to provide “Contact Us” webpage linked to email or phone. Gensuite wanted to have a web tool which can allow visitors (mostly potential clients) to contact Gensuite and Gensuite can track the status of received requests/inquires as well. As a solution they have decided to develop a web tool called Business Request Subscriber. The purpose of having Business Request Subscriber tool was so that potential clients can contact Gensuite via this form. Once visitor submitted this form, an email will be send to their marketing mailbox with the contents from the form. This external form had a connection to their internal App Tracking website which automatically log an action item as a Prospective Customers category for specific group of team, and email will be send to marketing team, their managers and distribution list if there is any. This process has
provided a platform for them to eliminate the Excel spreadsheet which they were maintaining to track received inquires.

Gensuite also wanted to have their own recruiter tool where they can post their open positions. The way, they were growing, it was a very nice to have their own Recruiter Management Application where they can post any open positions and jobseekers can apply for these positions and upload their resume. The Recruiter Management Application helped Gensuite to find a higher level of quality of the candidates in the shortest time with for any open positions. The aim of an online Recruiter Management Application was to facilitate filling open jobs vacancies with qualified and suitable candidates.

Gensuite had expressed the idea to have their own HR department and develop related HR applications. Developing Recruiter Management Application was a great start point for HR project.

For my senior design project, it was nice project to work on which has provided versatility in different fields such as designing dynamic web pages with ColdFusion, creating business request subscriber web tool and Recruiter Management Application. My plan was to provide Gensuite a cost-effective and reliable Gensuite website, Business Request Subscriber Web tool and Recruiter Management Application.

1. 3 User Profile

The main users of my project can be placed into four groups:

1. Visitors/potential clients of the Gensuite Website – No permission needed to view contents of Gensuite website.
2. Potential clients who are interested to contact Gensuite via using business request subscriber web tool – No permission needed.

3. Gensuite Recruiter – Login required. They can add, edit, delete and view the job positions. They also have ability to view the applicant’s information and their resume. They can also view the details of submitted business requests.

4. Job seekers who are interested to apply for open positions. They can view the details of job positions, apply positions and submit their resume – No permission needed.

2. Design Protocols

Due to long project, the project was broken into two phases. The first phase of the project was to develop Gensuite website and business request subscriber web tool. The second phase of this project was to develop Recruiter Management application. Below is provided more detailed information of both phases.

2. 1 Gensuite Website with Business Request Subscriber Web Tool - Phase 1

The first phase of this project involved the development of dynamic website for Gensuite. To accomplish this project, I have interviewed Mr. Mukund and other key members to evaluate the company’s requirements and then developed a website to address their needs. The website were developed using ColdFusion, and was used Cascading Style Sheets (CSS) for all appropriate formatting.

The website was also tested against the W3C Markup Validation Service to insure compliance with current standards. The developed Gensuite website has presented the following general functionalities:

- Navigation Bar – provided easy way to navigate throughout the website at top and bottom too. It included the link to access Gensuite group at Facebook.
• Gensuite Homepage – included general overview of the Gensuite, its main three key points along with Gensuite image.

• Why Gensuite – included information on why to choose Gensuite as a service provider. It has also included feedbacks and comments received from their current subscribers.

• Products / Services – included list of Gensuite applications in compliance assurance, specialized process along with icons and sample images.

• About Gensuite – included general overview of the Gensuite, history, their mission and their current partners.

• Contact Us – included Business Request Subscriber Web tool* developed using ColdFusion and related data will be stored on Microsoft SQL Server.

• Careers – included list of open job opportunities and allow to apply – Phase 2 (see Recruiter Management Application under section 2.2 for more information)

All the web pages are indexed and include Meta search optimization feature so that site will appear during the Google search.

*Business Request Subscriber* is a web tool which is integrated with the database and it helped their potential clients to contact Gensuite and it makes sure their requests are being taken care on timely manner. This Web tool was developed using ColdFusion and related data are stored on Microsoft SQL Server 2005, and automatically create action items to follow up with the requesters.

**Business Request Subscriber Tool Features:**

This tool has a series of questions, which visitors/potential clients will answer. Some of these questions are required to answer so this tool has proper validation for provided answers. Once visitors will submit this form, an email will be sent to Gensuite’s marketing mailbox with the contents from the form. This external web form is
also connected with Gensuite’ internal App Tracking website which automatically logs an action item as a Prospective Customers category for specific group of Gensuite team. After creating an action item, it also send an email to responsible person, their managers and distribution list if there is any. The whole reason behind this functionality is that all key members of the team are in the loop about the recently received requests/inquiries and they can make sure that request is being taken care properly. This webtool has provided a platform for Gensuite to eliminate the Excel spreadsheet which they were maintaining to track received requests/inquiries. Also, a “Thanks” email is auto generated and send to user letting them know that Gensuite has received their requests/inquiries, Gensuite will contact them soon. This web tool also has admin web pages which is only available to Gensuite team and will require to login via using GE SSO to view them. The admin web pages included functionality to search submitted online requests/inquiries, view their details. Figure 1 & 2 detailed the initial work flow for this tool and included the use case diagram.

![Business Request Subscriber Web Tool - Flow Chart](image)

**Figure 1 Flow Chart for Business Request Subscriber Web Tool**
2. 2 Recruiter Management Application Web Tool - Phase 2

The second phase of this senior design project involved the development of recruiter management application for Gensuite. This web tool was integrated with the database and it helped Gensuite team to post any open position and manage the tool and job seekers will be able to apply for these jobs and upload their resume. This web tool has two separate parts; external and internal. The external part is available via the Gensuite website as career section and open to everyone without any permission. The internal part of the tool is only available to Gensuite team members and require to login.
via using their GE SSO ID. It is mainly used to administrate the Recruiter Management Application. The whole Recruiter Management application was developed using ColdFusion and related data were store in Microsoft SQL Server database.

**Recruiter Management Application Features:**

1. Users can search jobs by keywords or any specific field.
2. Advanced Search feature.
3. Users can apply for open jobs positions.
4. Upload their resume.
5. Jobseekers only see approved posted jobs during their search.
6. Automatically e-mail functionality.
   a. **To applicants once they apply a job:** This email is auto generated to applicants when they apply a position. The purpose of this email is to confirm them that Gensuite Human Resources (HR) has received their resume and convey thanks for applying for positions.
   b. **To Gensuite Human Resources when a job is applied:** This email is auto generated to responsible Gensuite Human Resources when applicant has applied a position. This email contains applicant’s personal info, job details and link to access their resume from the email, view applicant details online and view the details of applied job position.

7. Gensuite Human Resources team members can performed following tasks to administrate the Recruiter Management Application:
   a. Gensuite HR team can add or edit job descriptions and saved them as draft.
   b. Gensuite HR team can review drafted job descriptions and approved them to post these jobs at Gensuite website.
c. This tool provides a platform for the Gensuite HR team to search for the suitable applicants for a specific job positions.

d. Gensuite HR team can view all the applicants’ information and view their resume for applied job positions.

Figure 3 details the initial work flow for the Recruiter Management Application for external and internal (Gensuite HR team). Figure 4 details the use case diagram for the Recruiter Management Application.
2.3 Technical Details

2.3.1 Hardware Requirements

To accomplish this project, I acquired a laptop or desktop running with below listed software for this project. Since I worked for this company, they had provided me laptop and ability to connect with their server. This laptop had all the licensed programs installed in it. I only needed one 1GB USB to backup all data for this project.
2. 3. 2 Software/Languages Requirements

- Windows XP - One of the operating systems required to run the application.
- Microsoft Visio 2008
- Microsoft SQL Server 2005
- Adobe ColdFusion
- Macromedia HomeSite+
- CSS - to styling the web pages
- JavaScript – to validate required fields/email/blank fields
- Microsoft Paint - to create and edit some of the design elements for this project.

There was no cost associated with using above listed software as either these products were available free of charge from UC MSDN Academic Alliance site or these were already available in laptop provided to me from Gensuite.

2. 3. 3 Database

The database for this project was very simple with normalized tables. These tables have one to many and many to many relationships as necessary. These tables have indexed and auto incrementing primary keys. The main tables were Jobs, Applicants, and Request tables. Figure 5 shows the layout of the main three tables. The Request table has stored information of submitted requests. Jobs and Applicants table stored job position details and applicant’s details and which job they have applied. Both tables have one-to-many relationship. At_Tracking and bus_list tables were already created by Gensuite, and I used them to store action items details; such as who is responsible to follow up with requesters, due date etc. Bus_list table was used to store list of all businesses who have either contacted us via online or email. It also listed the businesses that were already subscribed to Gensuite.
<table>
<thead>
<tr>
<th>Jobs</th>
<th>Request</th>
<th>Applicants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column Name</td>
<td>Data Type</td>
<td>Description</td>
</tr>
<tr>
<td>JobID</td>
<td>int</td>
<td>Auto/PK</td>
</tr>
<tr>
<td>SSOID</td>
<td>int</td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>nvarchar(55)</td>
<td></td>
</tr>
<tr>
<td>JobTitle</td>
<td>nvarchar(55)</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>nvarchar(55)</td>
<td></td>
</tr>
<tr>
<td>Salary</td>
<td>nvarchar(55)</td>
<td></td>
</tr>
<tr>
<td>JobType</td>
<td>nvarchar(55)</td>
<td>Full Time, Part Time, Temp etc listings</td>
</tr>
<tr>
<td>Category</td>
<td>nvarchar(55)</td>
<td>Experienced, EntryLevel, Intern, Summer Intern</td>
</tr>
<tr>
<td>JobLevel</td>
<td>nvarchar(55)</td>
<td></td>
</tr>
<tr>
<td>JobDesc</td>
<td>varchar(max)</td>
<td></td>
</tr>
<tr>
<td>EssentialResponsibilities</td>
<td>varchar(max)</td>
<td>Qualifications/Responsibilities</td>
</tr>
<tr>
<td>Qualifications</td>
<td>varchar(max)</td>
<td>Qualifications/Responsibilities</td>
</tr>
<tr>
<td>JobStatus</td>
<td>nvarchar(55)</td>
<td>Status of the position. Active, Archived</td>
</tr>
<tr>
<td>HowtoApply</td>
<td>nvarchar(55)</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td>nvarchar(55)</td>
<td></td>
</tr>
<tr>
<td>DateCreated</td>
<td>datetime</td>
<td></td>
</tr>
<tr>
<td>DatePosted</td>
<td>datetime</td>
<td></td>
</tr>
<tr>
<td>DateUpdated</td>
<td>datetime</td>
<td></td>
</tr>
</tbody>
</table>

Figure 5 Layout of the database tables and related columns

2.3.4 Interface Design/Navigation

The overall method of moving through the website was by following links located on the top bar. I have also included links at bottom for easy access throughout the website. The web design has been implemented by keeping in mind that every page can be accessed from home page in less than three clicks. The header and footer were separate files which are included in each webpage. Having separate files for header and
footer helped to manage the website easily. All the webpages which had buttons either interact with the database or bring up other webpages.

2. 3. 5 Icons/G graphical Symbols

The company logo was used in all webpages. In order to make it easy to maintain, logo was included in the header page and controlled from header.cfm file and CSS file. Also, another icon that was carried through the project was the help icon. This little icon located next to label name and when the user clicks on this icon or mouse over, it brings up the additional details about that field. The help icon was included in Contact-us and apply job, add job, edit job pages which has web form.

2. 3. 6 Color Scheme

The color scheme for this project was chosen as combination of blue and sky blue. The colors chosen were based on the logo for the company.

3. Deliverables

To provide a well-designed and easy to use system, a wide range of deliverables had been laid out. The following deliverables were the result of the design phase of the Gensuite Website:

- A Web-Based Business Request Subscriber Tool & Recruiter Management Application along with Gensuite Website.
- A Website that demonstrates Gensuite and its services.
- The Website was developed to allow potential clients to contact Gensuite and apply for open positions.
- A back-end RDBMS that facilitated the development of a dynamic front-end interface. This RDBMS was developed on SQL Server 2005.
- A dynamic front-end interface developed in ColdFusion and JavaScript.
• Light security access has been implemented.

• Authentication for administrative users of the database.

• A general navigation bar on every page for easy navigation on the application.

• Unique forms for external users and reports for internal Gensuite team members to allow to view request details and applied job positions. Internal team must need to login using their GE SSO ID.

• The web application and website were compatible with Microsoft Internet Explorer 6.0 and above.

• Users of the Gensuite website were able to complete the following tasks:

  a. Internal Gensuite HR Team:

     i. Secure login authenticated.

     ii. Add, edit, delete search, view details of the jobs etc.

     iii. View applicants details, their resume, update applicant’s status etc.

     iv. View submitted online business request subscription inquiries etc.

     v. Auto Generated Emails to Gensuite team when request been submitted and job position been applied.

  b. External Users:

     i. Search Jobs: Users can search jobs using available filter options or using default settings. This search feature only displays jobs which have status as “Active”.

     ii. View Jobs Listings: Provide the listings of jobs based on criteria provided in “Search Jobs” page. It displays results in table format. Each job results provide link to “Apply” jobs and “View Job Details” if click on job title.
iii. **View Job Details:** Provide ability to view the details of the jobs. This page provides link to “Apply” job page.

iv. **Apply Job:** This page has two sections – at top section, user can provide their personal info such as name, phone, email etc. (required fields) and they can upload their resume. The bottom section provides details of job.

v. **Submit Subscriber Request:** Users can submit their requests/inquires or questions using this form.

vi. Auto Generated Emails to user when they submit the requests/inquires or apply for job position.

4. **Project Planning**

   All of the related tasks for this project were performed from my home, and I worked on weekends. I sometimes used UC computer lab but, I used my own laptop for this project. I also tried to work from my office but that was depended on my availability from my job responsibilities at work.

   Due to Gensuite’s urgent need on Gensuite website for a meeting in March 3, Gensuite wanted to finished Gensuite website and external part of BRST and RMA before that meeting. Gensuite website, BRST and RMA have been tested and released on Feb 28. I worked more than 60 hrs on Feb to complete the project, test and release them. Throughout this project, I have continuously interviewed Gensuite key members to for their feedbacks. The main discussion points of the meeting were below listed tasks:

   - Web Design Reviews
   - Database Design Reviews
   - RMA Process & Functionality Reviews
   - Action items Functionality Reviews
4.1 Timeline

During Senior Design 1 (autumn), I have gathered the website requirements and developed the Gensuite website. I have also gathered the questionnaire and designed the layout of the Business Request Subscriber web tool.

In Senior Design 2 (winter), I completed the database development for the Recruiter Management Application as well for the Business Request Subscriber Web tool. I have completed 80% development of the core functionalities features and have completed the required services in winter quarter. We have release the website, business request subscriber tool and external recruiter management application on production on Feb 28, 2011. The design freeze was scheduled on March 14.

In Senior Design 3 (spring), I have developed all required project documentations for this project. I also added additional features in internal recruiter management application. I kept this time as backup which was be useful as any changes needs on my tools based on feedback received from Gensuite. The final project was reviewed with Gensuite key members and the project was concluded on April first week.

During the development of this project, I was confident that the project will be completed as detailed in the timeline below. Figure 6 details an organized timeline of the events that must take place to insure a successful project outcome.
Figure 6 Timeline of the Project

4. 1 Budget

Most of the costs outlined below in Figure 4 were the retail cost presented for purchase. All of the needed hardware and software was available in the IT lab located on the fourth floor of the College of Engineering & Applied Science - Victory Parkway campus Administration building and they were also provided to me be Gensuite. The only potential cost for me was the purchase of the USB drive to backup files. Figure 7 details the proposed budget for this project.

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Estimated Cost</th>
<th>Actual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop/Desktop with following software</td>
<td>Provided by Gensuite</td>
<td>$1,500</td>
<td>$0</td>
</tr>
<tr>
<td>Windows XP</td>
<td>Provided by Gensuite</td>
<td>$150</td>
<td>$0</td>
</tr>
<tr>
<td>Microsoft Visio 2008</td>
<td>Provided by UC MSDN</td>
<td>$300</td>
<td>$0</td>
</tr>
<tr>
<td>Microsoft SQL Server 2005</td>
<td>Provided by Gensuite</td>
<td>$1500</td>
<td>$0</td>
</tr>
<tr>
<td>Software</td>
<td>Provider</td>
<td>Cost</td>
<td>Included</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>Adobe ColdFusion</td>
<td>Provided by Gensuite</td>
<td>$1200</td>
<td>$0</td>
</tr>
<tr>
<td>Macromedia HomeSite+</td>
<td>Provided by Gensuite</td>
<td>$150</td>
<td>$0</td>
</tr>
<tr>
<td>Microsoft Expression Studio 3</td>
<td>Provided by UC MSDN</td>
<td>$500</td>
<td>$0</td>
</tr>
<tr>
<td>Microsoft Paint</td>
<td>Included in Windows</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>1GB USB Drive</td>
<td></td>
<td>$50</td>
<td>$50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$5,350.00</strong></td>
<td><strong>$50.00</strong></td>
</tr>
</tbody>
</table>

**Figure 7 Budget of the Project**

5. **Proof of Design**

Due to release of the website, and Gensuite management were very excited and happy. The whole website had been verified by key members of the Gensuite team. They have presented Gensuite website during multiple meetings & seminars along with Business Request Subscriber tool. Many businesses have contacted Gensuite via using BRST and also they have received multiple resume for their open positions.

5.1 **Prototype**

The main protocols of this project are Gensuite website, Business Request Subscriber Request tool & Recruiter Management Application. Below is provided the screenshot for each protocol.

5.1.1 **Gensuite Website**

The website of the Gensuite will have four main pages which are main home page, why Gensuite, products/services and about us page.

a. **Home page (index.cfm):** This is the main home page which shows up first. This page includes header footer and quick links to access other pages of the website. It has three main sections which have concentrated about other three pages of the website. I have designed the website keep in mind to access all the information within less than three clicks. Figure 8 shows the image of the header of Gensuite website.
Figure 9 shows the image of the main home page, along with the header and footer to access other webpages within Gensuite website.
b. **Why Gensuite (why-gensuite.cfm):** This is the second webpage which display information about why potential clients should take advantage of Gensuite. This page also has a section which has included received feedback from the customers. Figure 10 shows the image of the Why Gensuite webpage.

![Figure 10 Why Gensuite webpage of Gensuite website](image-url)
c. **Products/Services (products.cfm):** This is the third webpage which display information about Gensuite products. It has also included images of their some of main applications so that visitors have better understanding of their products. These images show up upon clicking on icons. Figure 11 shows the image of the Products/Services webpage.

![Figure 11 Products/services webpage of Gensuite website](image-url)
d. **About Us (about-us.cfm):** This is the fourth webpage which display information about Gensuite, its mission, year to year progress and show the list of their current partners.

Figure 12 shows the image of the About Us webpage.
5. 1. 2 Gensuite Business Request Subscriber Tool

The Business Request Subscriber Tool of the Gensuite website allows easy way for potential clients to contact Gensuite. This tool keeps track of received requests/inquires and create action item to Gensuite team to follow up with requester to answer their questions. Figure 13 shows the image of the Contact Us webpage. Once requester complete and submit the contact us web page of Gensuite website, an action item get assigned to Gensuite team automatically from AppTracking.

![Contact Us webpage of Gensuite website](image)

Figure 13 Contact Us webpage of Gensuite website
Figure 14 shows the image of the internal AppTracking webpage. In order to access this page, Gensuite team must login to the system using their GE SSO ID. This was an internal webpage and must require VPN connection. The action items automatically get assigned to Gensuite team upon submission of the Contact us page. The action items are due after a week, once assigned. It shows up in yellow if due in three days, and shows in red if due in less than two days.

Figure 14 Assigned action items at Apptracking. GE SSO login required

Figure 15 shows the image of the administrate action items assigned at AppTracking. In order to access this page, Gensuite team must login to the system using their GE SSO ID. Gensuite team can edit the contents of the action item, reassigned action item to other Gensuite team members to follow up with requester. They can update the due date of the action item, provide additional follow-up details or can add attachements. Any updates on the action item send email notifications to key members.
Figure 15 Update or Reassign Action item to other team members

Once requester submitted their request through Gensuite website, two auto-generated email get delivered automatically. First email sent to requester, which contains details of submitted request/question. This email get sent to requester from Gensuite marketing email. The second email gets deliver to Gensuite Strategic Initiatives team with the details of submitted request/question. This email also provides quick link to
access the submitted details online. Figure 16 & Figure 17 show the image of these emails.

**Figure 16** Auto-generated email to requester upon request submission

**Figure 17** Auto-generated email to marketing team upon request submission
5. 1. 3 Gensuite Recruiter Management Application

This section of the tool has two sections, internal and external. The external section of the tool can be accessed from Gensuite website and allow job seekers to search job, views details of the open job positions, apply these positions and forward jobs to friends. Figure 18 shows the image of the Career external webpage. From this page, job seekers can search a specific job using either keywords or using provided filter options, which are type, category and level. The keywords search from the job description, qualification and job responsibilities. It provides link to view job details and apply for open job positions.

![Figure 18 Career webpage of the Gensuite website](image-url)
Figure 19 shows the view job details page. Job seekers can also apply for jobs from this page.

Figure 19 View Job Details webpage at Gensuite website

Figure 20 shows the apply job webpage. Job seekers can apply for jobs from this page. It requires job seekers to upload their resume in .doc, .pdf, .html files and provide their initial information such as their name, email and phone. Gensuite management
really wanted a simple process to apply for open jobs without asking too much information from applicants. Once applicants applied for a position, two separate auto generated mails sent to applicants and Gensuite hiring team (Figure 21 & 22).

Figure 20 Apply Job webpage at Gensuite website
Figure 21 Auto-generated email to applicant upon job application submission

From: Singh, Roli (GE, Corporate, consultant)
Sent: Thursday, March 10, 2011 10:15 AM
To: Carter, Josh (GE, Corporate, consultant)
Subject: Job Application for Product Developer Intern

Gensuite Recruiter Manager

Job Application Confirmation

Dear Josh Carter,

Thank you for your resume submission for the position of Product Developer Intern. We look forward to reviewing your resume. If your profile matches the skills and abilities that we are looking for, we may be in contact with you regarding this opportunity.

Please note if you are not contacted, this is the only correspondence that you will receive. Additionally, we will keep your information in our database and it may be evaluated with respect to other positions that become available in the future. We wish you success in your job search.

Again, thank you for considering Gensuite LLC as an employer.

Sincerely,

Gensuite Team

Figure 22 Auto-generated email to hiring team upon job application submission

From: Singh, Roli (GE, Corporate, consultant)
Sent: Thursday, March 10, 2011 10:15 AM
To: mrsroli@yahoo.com; Singh, Roli (GE, Corporate, consultant)
Subject: Job Application for Product Developer Intern

Gensuite Recruiter Manager

Dear Hiring Manager,

A new resume was submitted for the position of Product Developer Intern at Cincinnati, OH.

Applicant Information

Applicant Name: Mr. Josh Carter
Applicant Email: josh.carter1@ge.com
Applicant Phone: 234-534-5654
Applicant Resume: Test_test1.docx

Applicant Message:

Dear Testing Site Manager,

This is in response of the position Product Developer Intern. Please find attached my resume. I am confident that my work experiences, team management skills and excellent time management skills would be an asset in this role. Thank you for your time and consideration. I hope to have the opportunity to discuss the opening with you in person. If you have any questions, please feel free to contact me. Thanks.

Josh Carter
The Internal section of the RMA tool is accessed by only Gensuite team members. In order to access this tool, Gensuite team must login to the system using their GE SSO ID and it must require VPN connection. This tool allows them to add/ edit/ delete job positions, allow to view applicants details who have applied to positions and view their resume. Figure 23 shows the admin page from which Gnsuite can search submitted business requests, search jobs, edit jobs, deleted jobs, view applicants information and add jobs.

![Admin webpage to search jobs and add job positions](image)

**Figure 23 Admin webpage to search jobs and add job positions**

Figure 24 shows the add job webpage. Gensuite team can submit jobs in-progress, active or archived status. Only active jobs will appear at Career section of the Gensuite website. When “active” will be selected from Job Status drop down list, the Job Post Date field appears below the job status field. It automatically selects current date as job post date but it is editable field. The company name and location field are pre-populated since most of time they are constant fields but they can be edited; if necessary. Drop down list boxes have been used to avoid typing as much as possible. Help icon has been used to provide additional guidance.
Figure 24 Add job webpage allow to add job positions. Only active jobs will appear at Career section of the Gensuite website.
Figure 25 shows the edit job webpage. Gensuite team can update jobs in-progress, active or archived status. Only active jobs appears at Career section of the Gensuite website.

When “active” get selected from Job Status drop down list, the Job Post Date field appears below the job status field.

Figure 25 Edit job webpage allow to edit job positions. Only active jobs will appear at Career section of the Gensuite website.
Figure 26 shows the internal search job webpage for Gensuite HR team. This page is only accessible to Gensuite HR team and requires GE SSO ID login. From this page, HR team can search a specific job using either keywords or using provided filter options, which are type, category, level and status. The keywords search from the job description, qualification and job responsibilities. It provides link to view job details, edit the job details, delete jobs, view the applicants details who have applied positions. There is also applicants count which present how many applicants have applied any open positions. If counter represent ‘0’, which means no one has applied yet or positions are not active yet. From this page, HR team also can add new job position and can view external job which is linked to career section of the Gensuite website which show only active jobs and available to everyone. It provides quick way to return to main admin page via clicking on RMA button.

Figure 26 Internal job search webpage allow to search job positions
Figure 27 shows the list of applications and resume for specific applied job positions.

The HR team can update applicant status in as Shortlisted, Interviewed, Selected, Rejected, Not Available status. By default applicant status will be setup as “New”.

Gensuite team can sort the list by Applicant Status, Date of application, and by Applicant Name. Team can download or view applicant’s resume. From this page, HR team can also view the job details by clicking on ‘Job Title’ and they can also view the details of applicant by clicking on applicant’s name. Figure 28 shows the details of applicant. They can also download applicant’s resume from this webpage.

![Application list for applied job position](image1)

![View applicant’s details](image2)
Figure 29 shows the internal search submitted business requests/inquires webpage for Gensuite team. This page is only accessible to Gensuite team and requires GE SSO ID login. From this page, team can search a specific submitted business requests/inquires using either keywords or using provided filter options, which are industry segment, company revenue, and reference. The keywords search from the company name, requester name, requester job title, and requester questions. It provides link to view requests/inquires details. Figure 30 shows the details of requests/inquires.

**Figure 29 Internal Business Requests search webpage to search requests**

**Figure 30 View submitted Business Requests’ details**
6. Testing

The Gensuite website with Business Request Subscriber Tool and Recruiter Management application have been tested thoroughly by team members for discrepancies, errors, usability, accessibility, and performance issues. After the satisfaction results, the project was released on production. For each targeted testing scenario, I have documented test cases that was easy to follow. Some of these testing scenarios are listed below.

- **Page layout**: Verified all the related web pages, web forms and auto generated emails had same layout and look.

- **Links**: Verified associated links were working and not giving any errors in web pages, web forms and auto generated emails.

- **Tab order**: Verified that in the web form, tabs were in order and going to appropriate text fields in web forms.

- **Text & Color appearance**: Verified that text and color of text in all web pages, web forms and auto generated emails were in same so that it gives same appearance feeling.

- **Headings, titles, and labels**: Verified that headings, titles, and labels were same within all web pages, web forms, and auto generated emails.

- **Text boxes and validation**: Verifid that text boxes within web forms had proper validation; such as:
  - Verified each text fields can have only valid information. It provides warning/error message if they are required and users have left them blank.
  - Verified that text fields cannot take “space” as data entry.
  - Verified to eliminate the spaces from beginning and end of the text.
- Verified that ‘Email’ text field can have only valid email address.
- Verified that ‘Date’ field can only accept valid date.

- **Navigation:** Verified to provide proper navigation throughout the web hunting.

- **Scrolling and paging:** Verified that webpages were not too long with too much information which make hard to read. If there was a need to have long webpage, break the them into sections and provide links to jump with these sections within the webpage.

- **Help:** Verified to provide help text guidance to users so that they know what exact action they need to take while browsing the web application.

- **User access and roles:** Verified appropriate users had certain permission and they were the only one able to access that web sections.

- **Database & Security:** Verified the database was secure and not accessible its records using SQL injections. Any relevant information must not be accessible from view source of the webpages.

- **Action pages & Error Handling:** Verified the action pages are not accessible directly. They must be only accessed from main content pages. Also made sure to provide valid message in case of error instead of giving default error.

- **Graphics, images, and multimedia:** Verified all media fields are located at different folder and they were not giving any error. Verified that these media files compatible with web browsers.

- **Functionality of web application & Business logic:** Verified the functionalities of the application were working and they were reverent to Business logic. Such as:
  - Verified that delete job functionality is not available if job positions have been applied.
o Verified that external users don’t have ability to apply job positions which is still in progress.

o Verified that external users don’t have ability to view add, edit and delete job positions.

o Verified that external users don’t have ability to view how many positions have been applied and applicant’s details.

The Gensuite team also have performed usability test and user acceptance test before releasing the final project on production. During test, they have found few glichs such as issues with formatting for auto-generated emails, and outlook issues which have been fully resolved. They also requested for few format updates in the webpages. After full satisfaction from the received testing results, final products have been released on the production.

7. Conclusions and Recommendations

7.1 Conclusion

I decided to develop Gensuite website with Business Request Subscriber Tool & Recruiter Management Application as my senior design project because there was a clear business need. I felt that I can fulfill their need while testing my existing skillset and learning along the way. Through this project, I satisfied and fulfilled to solve many of Gensuite’s challenges and provided them a solution which have flexbility to expand in future. This project was a huge and versatile through which I have learn a lot about Web application, ColdFusion and SQL Server. I am very positive that Gensuite were greatly benefitted from using Recruiter Management Application to find right candidates and increased their market visibility by implementing their website.
7. 2 Recommendations

In order to use the application proficiently, all users need to have basic web browsing skills and knowledge in interacting with web forms. This is a very simple and easy to use application and has expendability in growth in future.

1. **Flash Movie**: In future, Gensuite can create a flash movie linked to Gensuite Homepage, which includes general overview on Gensuite and its mission.

2. **Enhanced online Application**: Gensuite can enhance this tool and include online application which job seekers can use to fill out and provide related information directly from their resume. Gensuite can also include options to job seekers to create their login so that they can check the status of their application. They may select their own job agent based on their job interest, which will send auto notifications whenever any job positions will be available based on their selected criteria.

3. **Human Resource Tool Integration**: This application has full capability to integrate with human resources tool.
References

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