Case Study

Saloon & Service Appointment Management System
For
USA based Client

[INFORMATION TECHNOLOGY – CUSTOM WEB & MOBILE APPLICATION DEVELOPMENT – ASP.NET, C#, MS SQL SERVER, IOS, ANDROID]

Client Overview

**About Client:** A USA based client providing online web-based services for salon industry across the various countries considered as United Stated, United Kingdom, Australia and Canada.

**Requirement Overview:** The aim was to develop online software for salon industry and deliver it based on SaaS model to different saloon owners. Subscribing to this software the salon owner can have their own online salon store and provide a new way to their business. The software was required to provide convenience to saloon customers (service appointment hirer) to book online appointments using a user friendly calendar. The software should suggest a nearest store location. The website is having mainly four types of users such as: Salon owner, Salon services provider person (Man/Woman salon services provider under each salon), Customers (Salon services hirer) and Website super administrator.

Client wanted to provide more comprehensive features within robust website architecture along with more user-friendly and efficient accessibility to the application users. Website was required to have social site integration options within Twitter and Facebook.

The client wanted to implement features like inventory management, managing payroll, call-to-confirm appointments and sending out reminders for its business users (saloon owners / service providers) besides creating their business website and social networks.

Client wanted to develop this software product through various technology platforms such as: Web-based development, Mobile Platform development (iPhone / iPad / iTouch / Android) & Facebook Website Development.

**Proposed Solution:** Silver Touch has proposed web-based solution using .Net based technology platform over the window server 2008 operating system. The interfaces of the proposed web-based application were designed to have rich user experience and a user-friendly way to access functionalities. The proposed solution also makes use of mobile platform and has apps available for iPhone/iPad and Android. It has TWO mobile applications one for Business Owners and other for their Clients. The website is having a role based access for each user and
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provides powerful & unique features to the following user types:

1. **Calendar Management:** The proposed solution offers full featured calendar management functionality. This enables each service provider (saloon owners / businesses) to manage their customer appointments by having multiple types of schedules on daily, weekly and monthly basis. Each service provider can manage the working hours, prices and service durations through this functionality. On the other end, each customer has the option to book their appointment by choosing specific salon services, specific service provider under a specific salon.

2. **Online Appointments:** This functionality is allowing users to book appointment by 24/7 online. Customers can book online for multiple services with multiple service providers at once. Only available timings of each service provider are shown.

3. **Email/ Text / Push Notification:** The solution makes use of emails and sms notifications and enable salon owner to update their customers. The saloon owners can let their customers know about upcoming events and/or any promotional offers run by them.

4. **Customer Tracking:** Using this functionality each salon owners is able to track their customers. This include accessing the information like contact details, services availed, retail history, IOUs, formulas, allergies, general notes, attendance, reward points and feedbacks posted. This information can be pulled for any selected salon and/or service provider.

5. **Point of Sale (Taxes, Inventory and Inventory):** The proposed solution has a PoS module intended towards automating the retail operations specific to Saloons & Spas. This includes integration with credit card reader and bar-code reader to achieve retail transaction.

6. **Payroll & Employee Management:** The solution provides ability for the saloon owners to manage the employee data and payroll. The payroll related data is captured into the system. Saloon owners can customize payroll report per service provider, pay period and Commission structure.

7. **Reporting:** The solution offers salon owners to generate trend reports on a daily, weekly, monthly and annual basis. Also progress reports, revenue summary, service spread, retail sales spread, service-provider sales, product sales and customer retention. Each report can be exported to Excel, CSV, PDF or text formats.

8. **Own webpage creation:** The proposed solution offers the saloon owners to create their own website. This feature (website) is also included in the SaaS based delivery. The website created for each salon owner has well structured information management of their own. This information include Promotions, Styles, Services details, Service provider details, Reviews, Contact information, Email address, Salon website and Directions. Whereas the customer can able to view salon specific information each as different services, prices and service providers related details.

**Project Description**

Initial concept behind this project is to present a platform for all salon owners, which allows customer to book appointment online and on other hand it provides a great interface for salon owners to manage their schedules. Client’s revolutionary web-based appointment calendar allows customers to view and select the most convenient times to schedule their appointments with salons, 24 hours a day. While browsing the site, customers can search for the best prices, the best promotions, the latest styles, and the
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best reviewed stylists in their area. For salon owners and their staff, the software and web site eliminates the tiresome and tedious task of scheduling appointments using a pen and paper. Along with this innovative technology, salons have the ability to advertise their special promotions, showcase their salon, their stylists, and their latest styles to build new clientele.

This product is now available in 5 different platforms: Web application, iPhone interface, Android interface, iPad and iPod interface.

*The product will shortly be launched on Blackberry & Windows Mobile platform as well.*

**Objectives**

The Project Objectives were:

1. To evaluate best solution for booking online appointments and manage the same.
2. To develop the outlook type calendar with different views to display the appointments and perform various actions on that.
3. To develop secure web based access to the Users, Powerful search capability of appointments.
4. Development of an iPhone/ android/ iPad and iPod applications for hair dressers to manage their daily schedules.
5. Develop a proximity search based on the zip-codes in 100 miles radius.
6. To manage the accounts of customers, hair dressers and the shop owners.
7. To implement points based promotional schemes.
8. To integrate merchant gateway with features like recurring payments and refunds.
9. Use new .net feature called LINQ to perform database transactions.
10. To develop SOA architecture using LINQ to support iPhone application using web services.
11. To implement web-based POS (Inventory, Payroll and Reports).
12. To develop IOU functionality and manage the same.
13. To implement SEO.
14. 3rd party limitation for payment gateway and authorized .net
15. To develop website compliant to Web 2.0 standard.

**Project Approach / Activities**

The Project was divided into various phases to achieve the best results in less time with optimal utilization of available resources.

1. **Phase I:** Prototype designing and system understanding by using Wire Frames.
2. **Phase II:** Analysis the System Flow, database design and dependable entities. Review risk points of database and application.
3. **Phase III:** Create new applications for Web, iPhone and Web Service.
4. **Phase IV:** Testing all features and making deployment plan.
5. **Phase V:** Setup of testing environment (same as the production environment) and creation of same workload as production environment.
6. **Support & Maintenance:** Ongoing, under a separate contract.
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Technology

### Development Platform

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<thead>
<tr>
<th>Technology</th>
<th>Specifications</th>
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<tbody>
<tr>
<td>Technology &amp; Framework</td>
<td>.NET Framework 3.5</td>
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<tr>
<td>Third party tool</td>
<td>Technical control</td>
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<tr>
<td>Database</td>
<td>SQL Server 2008</td>
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<td>Web Server/Hosting Platform</td>
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<td>Languages</td>
<td>ASP .Net, C#</td>
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<td>Operating System</td>
<td>Windows 7</td>
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### Deployment Platform

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<td>Windows server 2008</td>
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<tr>
<td>Email</td>
<td>Comcast</td>
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<tr>
<td>Hosting (Website &amp; Web-services)</td>
<td>3rd Party Cloud Servers</td>
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<tr>
<td>Number of Servers</td>
<td>More than 7 Servers (web servers and database servers)</td>
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<tr>
<td>Security</td>
<td>SSL Certificates, Captcha</td>
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<tr>
<td>Encryption</td>
<td>TripleDES Cryptography Algorithm</td>
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<tr>
<td>Prevention</td>
<td>Custom Code deployed for preventing SQL Injection and DDOS Attacks</td>
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The mobile apps have been developed for android and IOS users and are deployed over respective app stores.

Duration

1. Project Man Hours: 34000 Man Hours
2. Project Life Cycle: 1000 Business Days

Benefits

1. Website is providing online salon finder facility to their Users/Customers.
2. Customers can search salon services using this website and have Appointment & Scheduling for salon services done per their convenience.
3. Customers should able to choose desire Service provider after selection from specific salon industry.
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Key Challenges

1. Outlook type calendar development and management on a web based application.
2. Payment gateway integration for recurring payments, card present transactions and card does not present transactions with refund facility.
3. Proximity search based on the zip-codes in 100 miles radius to search the salons in specific state and city.
4. Ensuring the security of personal data of users.
5. SEO implementation and dynamic URL re-writing.
6. To minimize the number of post-backs to make AJAX enabled web site.
7. Implementation of more than 70% of web site functionalities in iPhone application.
8. SOA architecture (using LINQ) to communicate to iPhone with live database.
9. Implementation of Credit card reader and bar-code reader for POS.
10. Implementation of IDU and its management.
11. Managing emails and text messages for appointments.
12. Hourly backups and restores between two machines. So when one dies the second activates.
13. Sending special promotions through emails and text messages to all the customers who come under specific radius enters by the user at run time.
14. Managing the timings of all the salons reside in different states of USA by considering the time difference between them and day light saving.
16. Unit Test, Integration Test, Regression Test before deployment.
17. Separate merchant Account.
18. Credit card payment with credit card swipe.
19. Online appointment search:
   19.1. By multiple booking
   19.2. In less than 5 second
20. Graphical report
21. Synchronization of database
   21.1. Client website is developed in more than one platform via single database synchronization.
   21.2. Concurrency issue: Online Booking for hair cutting by more than one user at the same time.

Results Achieved

1. Developed online booking & scheduling software for Salon Industry OR Virtual shop online management.
2. Payroll management & Inventory Management.
4. Gift certificate advance functionality.
5. Number one website in USA.
6. Currently it has 6000+ Saloons & Spa in USA, Canada, Australia and United Kingdom.
7. A secured environment is created to hold the personal data of users.
Deliver best products, software solutions and services, on time with quality, and as per customer expectations

About SilverTouch

SilverTouch, a company established in 1992 is widely accepted for its IT solutions with a huge customer base in more than 20 countries across the world.

SilverTouch is actively engaged in Enterprise software development, enterprise content management, document management and IT consulting services such as Business process optimization, process consulting, implementation and customization of ERP. SilverTouch leads brilliantly in new technical developments such as: Mobile Application development services on iPhone, iPad, Blackberry, Android, J2ME and Windows mobile platforms. Even now, SilverTouch helps its global clients for major developments, deployments and managements of their mobility solutions and enterprise application development programs.

SilverTouch has alliance with several industry leaders such as Microsoft, Apple, Cisco, IBM, Oracle, SAP, Java, Dell, VM ware, Symantec, Sonic Wall which provides a competitive edge over other industry peers and targets to understand and cater to all types of requirements that concern our clients, thereby, leading to serve them precisely to their satisfaction.

For more information, please visit www.silvertouch.com or email info@silvertouch.com