

Online Appointment Booking System

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Abstract - Most organizations rely on the appointment scheduling systems to manage client's access to their service providers. Conventional appointment scheduling processes have intrinsic inefficiency because of the tendency to generate fragmented time slots. In this article, a solution, which considers service-provider mutual preference, is provided to guide the appointment scheduling process by means of schedule defragmentation. Computer simulation shows that service provider cooperation can effectively reduce schedule fragmentation, yielding higher appointment acceptance rate and time utilization rate at given appointment demand matched by service supply. When service time distribution can be accurately estimated, decreasing unit time slot size may further improve the appointment scheduling efficiency. In addition, a survey was conducted to identify the opportunities and challenges of applying the proposed defragmentation method in appointment scheduling practice.

Keywords: Fingertips, fragmentation, defragmentation.

I. INTRODUCTION

The Software Requirements and Specifications document (SRS) collects, analyzes, and defines high-level needs and features of the application based online appointment booking system. Hospitals, companies and other organization will use this application to manage all aspects of scheduling appointments for their clients. This software replaces the tasks that would normally be given to a receptionist or secretary by allowing clients to schedule their own appointments and by allowing companies to manage their appointments. This application can also be adapted to businesses that schedule appointments for their clients, for example, car dealers, beauty salons, etc. For simplicity, this SRS will only refer in general to a company and its client. The document will describe the product functions, requirements and constraints of the application-based online Appointment Scheduler System.

The purpose of this document is to define the requirements and the specifications of the application-based Online Appointment Scheduler System. It will describe the product functions, specific requirements, constraints and an analysis model. The analysis model will include use-case diagrams, class diagrams,. This document is intended primarily for the modelling and design Scheduler System and the project co-coordinator and shall serve as a basis for the upcoming phases of the project.

This application-based online Appointment Scheduler System shall enable clients and companies to schedule and manage their appointments with the latest software technology from the

comfort of their homes and offices. This application is capable of many interdependent tasks, some of which relate to clients scheduling their appointments, and some of which relate to companies managing their appointments. This application consists of two user interfaces: the client interface and the company interface.

II. LITERATURE REVIEW

Have you ever wondered about the things which had a lot of complexity in the past can be easily done on your fingertips? Yes it is possible. Here is the example which we would like to highlight is online appointment. Here everything is managed through the application of your smart phones. Companies need not to keep a separate staff to handle the appointments. As well as the users need not to call the receptionist of the company, instead can easily book the desired available time slot using the application. This application will completely reduce the human efforts and will be considered as the boon to the coming generation.

As the population of the country continues to grow, so too does the need for services and options. According to certain projections by the surveys, the country population will multiply many times. This, in turn, will result in a swell in the number of clients seeking services in different companies. While client growth certainly has its benefits, it also creates new challenges for facility administrators and their staff. Processes and procedures that previously were adequate may no longer be effective in handling a rise in new clients,

prompting administrators to seek out alternatives and new technology and techniques to assist them and their clients.

One process affected almost immediately from an increase in clients is appointment- scheduling. A requirement for individual care or to attend seminars, events and other activities at most industries, the seemingly simple task can quickly become burdensome and challenging to staff members. This is especially true if the facility continues to rely on the most standard— and also most inefficient—manner of scheduling appointments: over the phone.

While common in some office settings, scheduling appointments over the phone is a time- and resource- draining process that's also inconvenient for clients, especially in our Web-connected society where more and more individuals prefer to conduct common tasks—such as scheduling appointments—online instead of picking up the phone and calling them in.

There are certain benefits of this software, like:

Time Savings : Staff spends less time on the phone booking and managing appointments, thereby freeing up their schedule for more important and pressing tasks. Booking individuals also save time, as they no longer have to commit a part of their busy schedule to calling their company (or remain on hold, which adds minutes to the scheduling process). As an example, let's look at a large medical facility that typically schedules approximately 100 appointments daily. Each appointment call is fielded by an administrative support staffer, who spends an average of four minutes on the phone. This equates to an average of 400 minutes—or almost seven hours of time spend each day just to booking appointments over the phone. That's time savings just from scheduling appointments alone. Other tasks automated by an online scheduling system, such as automated appointment reminders, add additional time savings to daily operations.

Monetary Savings : The time savings experienced by a facility can translate into monetary savings, as both staff time and services translate into expenses and revenue, respectively. As staff resources can now be directed at other tasks, a scheduling system can eliminate the need for a staff member to work overtime or for management to hire new staff members to handle the work overload created by the appointment-scheduling process. In the latter scenario, the savings could be quite significant, as an average yearly salary of a medical office administrative assistant is \$36,000 (according to Indeed.com). Additionally, the aforementioned automated appointment reminders can also create monetary savings by reducing the number of “no-shows” who fail to make their scheduled appointments. Surveys.

III. SYSTEM ANALYSIS

In an environment characterized by low volatility and a slow business rhythm, it is perfectly possible to schedule field service crews manually—and not rely on software tools at all. In any number of industries, or a start-up company, without a lot of technicians in the field or a significant number of customers or site visits, it is reasonable to schedule technicians manually; relying on no more technology than pieces of paper and a few highlighter pens. The paper is typically ruled into squares with technicians' names down the left-hand side and time slots across the top. In each cell of the matrix are data reflecting the job that is to be handled by that tech in that time slot. The dispatcher will allocate newly arrived jobs into the empty slots, until each technician's day is full. This is obviously field service scheduling at its crudest level, but that is the starting point for many companies.

A subsequent iteration of this manual approach would be to use an Excel Spread- sheet, which is basically the same thing as the static, paper-based chart, but in an electronic format. Whether the tabular data is kept on a sheet of paper or in a spread- sheet, and even if the schedule is transmitted or visible electronically to techs in the field, the scheduling activity itself is still manual. The decision-making is still done by a dispatcher (or equivalent role) with a list of technicians to manage, and needing to pair those technicians with a stream of incoming work. The dispatcher decides which tech gets which of the jobs as they come in.

As suggested earlier, manual processes may be an adequate or even the preferred solution in situations where there are a smaller number of technicians, each technician is undertaking only a few jobs per day, and when those jobs are unlikely to change in priority, in sequence or in scope during the day.

A. Problems and weakness of current system

Where manual scheduling processes start to fail is when volume, complexity or volatility increases. When the schedule changes during the day, increasing volatility, it becomes very difficult to reconfigure a whole day's schedule—given the number of different dependencies, geographic distances and demands of each individual piece of work. As the number of technicians increases, a single dispatcher will quickly become overwhelmed, and a company will be faced with investing in additional personnel to manage their techs. Our experience indicates that, using manual systems, a single dispatcher can manage 15 or, in the most optimistic situation, 20 technicians. What this means is that a company with a growing field labor force can expect to hit some hard constraints that require either hiring more dispatchers, or investing in some form of field service scheduling automation.

Complexity in the process can also increase in a number of ways. Making the right decision becomes more difficult if you have got to consider where the techs are located geographically, the nature and scope of the work they are doing, what skills or certifications are required, which certifications or skills each tech possesses, which shifts they are on, which spare parts they may need for the job, what is the service level agreement (SLA) for this particular site/asset/type of problem, the location and access to this site, and so on – field service scheduling is truly a multi-dimensional problem.

IV. RESULT ANALYSIS

A. Login Page

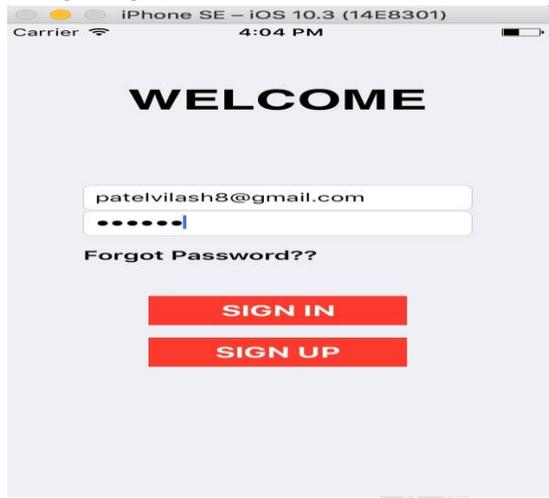


Fig. 1 Login

It allows registered user to login to the app using their Email id and Password. The information of the user is saved in to the local database.

B. Register Page



Fig.2 Register Page

It allows new user to register in the App to avail the Facilities of online Appointment Booking system.

C. Home Page

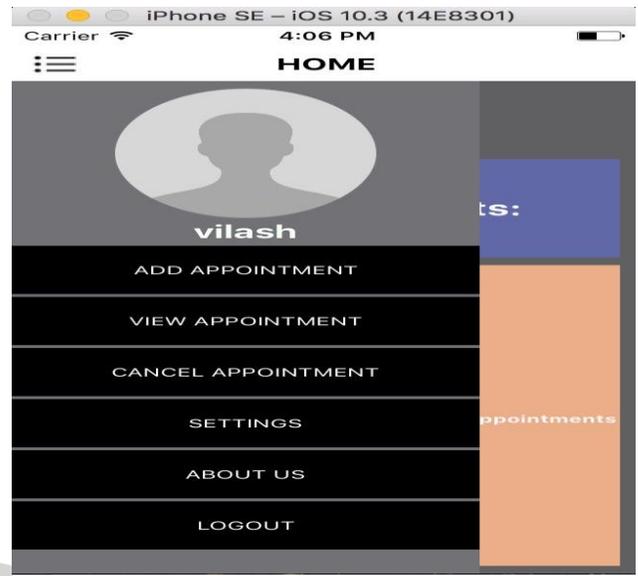


Fig. 3 User Profile page

The Profile page includes the personal information's and the information about the appointments viewed, booked and canceled.

User can securely log out of the App by clicking on logout button

D. Welcome Page

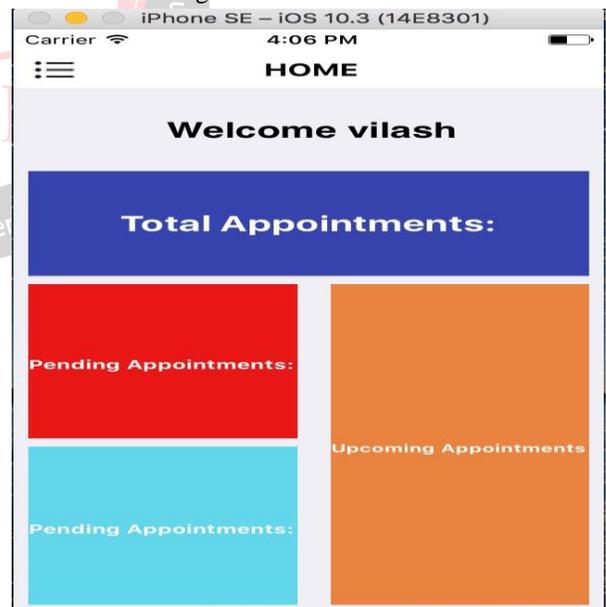


Fig. 4 Welcome Page

Entering their personal information: New clients are required to fill in a form in order to enter their personal information. The client's personal information will be stored in a database. The client's personal information includes their name, telephone number, e-mail address and password.

E. Personal Information



Fig. 5 Entering Personal Info.

Logging into the company interface of the system using a email and password: This applies to returning companies only. The user has a list of choices to select the Organizations.

F. Scheduling Page

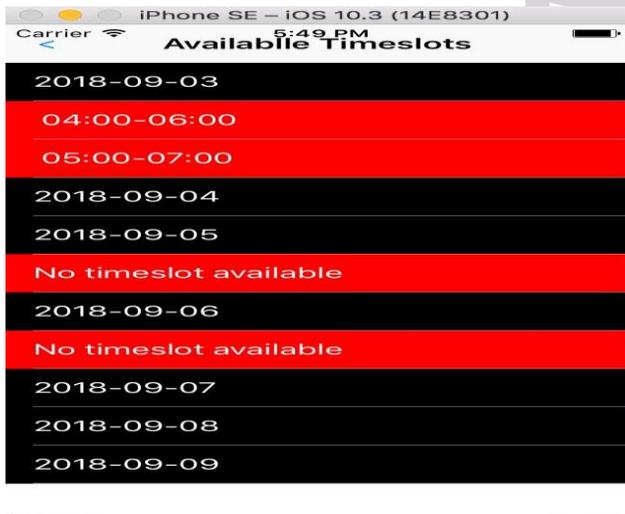


Fig. 6 Client Scheduling

clients can schedule their own appointments via the Internet. The client will be able to choose the company he/she wants. Each of these companies will set the time slots convenient to them. The client will accordingly book one of the times slots.

V. CONCLUSION

Technological advancements have caught up with most industries and the tasks they conduct. The scheduling and management of appointments and reservations is no exception. Proven online scheduling software systems are now readily available to all-sized organizations and for all scheduling needs, regardless of the scope of operations, the number of staff members, and their operating budgets. This technology can transform this oftentimes daunting process and enable them to run more efficiently, effectively and profitably.

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