

## **Abstract**

I am creating a booking system for patients at a doctors office in order for them to make appointments with their doctor at a certain time. This program has several different doctors working out of this practice each with different patients. Each patient will be prompted to input information such as name, date of birth, health insurance, type of visit and then choose a time for their appointment. The booking system will use all of this information to create an appointment for the patient and make sure that the doctor is available at that time. It has to check what doctor that patient sees and then check the availability of that doctor. The program will return to the user a reminder which contains the time and date of the appointment, the doctor being seen, and information saying that if the patient needs to change the appointment it must be done within 24 hours of the appointment or they will be charged. The patient will be able to change the time and date of their appointment if they need to, and then the program will return the new information.

## **Introduction**

The motivation for this program is to make the current doctors visit more efficient. At several different doctors offices it often takes a really long time for the secretaries to obtain all of this information from the patients, and ends up resulting in a long line of people waiting at the front desk. Then, it can take up to an hour to actually be seen by your doctor. All of this information can be obtained before the actual visit. Hopefully with this program wait times will be shortened and the overall doctors office experience will be more productive. At my orthodontists office

there was a program similar to this one which resulted in no wait time for any patient even on the busiest days.

### Detailed System Description

PatientInformation
<ul style="list-style-type: none"><li>- dOB:String</li><li>- healthIns:String</li><li>- name:String</li><li>- visitType:Int</li></ul>
<ul style="list-style-type: none"><li>+ getDOB():String</li><li>+ setDOB(dOB:String)</li><li>+ getHealthIns():String</li><li>+ setHealthIns(healthIns:String)</li><li>+ getName():String</li><li>+ setName(name:String)</li><li>+ getVisitType():int</li><li>+ setVisitType(visitType:int)</li></ul>

AppointmentInformation
<ul style="list-style-type: none"><li>- doctor</li><li>- dayOfWeek</li><li>- timeOfDay</li></ul>
<ul style="list-style-type: none"><li>+ getDoctor():String</li><li>+ setDoctor(doctor:String)</li><li>+ getDayOfWeek():String</li><li>+ setDayOfWeek(dayOfWeek:String)</li><li>+ getTimeOfDay():int</li><li>+ setTimeOfDay(timeOfDay:int)</li></ul>

## **Requirements**

The requirements for this program would mainly be to correctly check if the doctor is available at the specified time. The patient must input a day of the week (Monday - Thursday) and a time (hourly) and the program must make sure that the doctor is available at this time. The doctors will only have certain hours available in this program.

## **Literature Survey**

A solution to this problem that has been used by the Health Services office at Marist is walk in hours. On weekdays the health services office allows students to come in with no appointment from 12pm until 1pm. This is great because if a student does not have time to make an appointment before they realize they need one, this is a great time for them to stop by. However, this program will allow students to check if there is an appointment available before they walk to the office, therefore giving them a time that may work better with their schedule.

## **User Manual**

The patient will be given the questions specified above such as:

- Please enter your date of birth (MM/DD/YY):
- Please enter your insurance type:
- Please enter your last name:
- Please select one of the following: 1. Follow up visit. 2. First time visit. 3. Returning patient. 4. Urgent visit.

Once this information is verified the patient will be asked to pick a day (Monday through Thursday), The program will then return the doctor's hours of availability on this day. For example, if the patient chooses Tuesday, the message will say: For Tuesday, please choose one of

these times. 10am, 11am, 12pm, or 4pm. The program will then ensure that the time selected by the patient is a time that is available.

### **Conclusion**

The goals that will be accomplished by this system is to create an appointment for a patient to see a doctor, considering all of their information and availability. The program will return all of this information listed like a type of receipt for the patient to see and remember the time of their appointment.

### **Sources**

Introduction to Java Programming and Data Structures, 11th edition