1. Target

* By the end of the semester, the end goal is to have patients be able to schedule and view their doctor’s appointments through a calendar. Important dates, such as when the doctor will be out of office, will be available through this calendar, making the appointment process much faster than it would be through a call or mail. Additionally, important information regarding the appointment/procedure will be easily accessible for the patient.

1. Check/Evaluate

* The project’s success depends on the patient’s willingness to use the app, and the amount of doctor’s implementing it in their offices. The more offices using it, the larger quantity of users registering in the app and using its features. The success will also depend on how easy it is for users to access and navigate the app.
* On the other hand, the project’s failure will be defined by the doctor’s offices who don’t integrate or require its primary use. Also, if they do integrate it but don’t use it as their main organizational method. In both cases, the number of users will be low.
* The root cause will be eliminated seeing as patients will always have their appointment information and schedule organized. Also, alternatives are being provided for patients who can’t make it to the office.

1. Act/Standardize

* To ensure the process continues to work, the app will be continuously updated and modified upon seeing the user date, and what worked and what didn’t. The reminder system may also be tweaked to be more effective and modifying the user interface to make it easier to understand for both staff and patients.
* Upon working on the project, we will have learned how to properly turn an idea into a product, and how to develop a visual design that properly executes what is desired. Also, we will have gained knowledge on which tools are more efficient for these types of apps. Additionally, what we learned on the project could be implemented to similar apps on the academic aspect, like a virtual school calendar for parents with children in smaller grades.

1. Countermeasures
2. Display a calendar with scheduled appointments.
3. Be able to view available dates and schedule appointments.
4. Show appointment details (day, hour, place, steps to be taken before a process)
5. The patient can request a virtual check up in the case that they can’t physically make it.
6. Send reminders for upcoming appointments (alarm, text, reminder, etc.)
7. Patients can cancel, confirm, or re-schedule appointments up to a day before the original established date.
8. Show the procedure taking place and the time estimate.
9. If the patient has trouble by themselves (mental, physically), the app will notify the specified family member or guardian about the upcoming appointments.
10. Offer a quick survey for symptoms, therefore avoiding unnecessary scheduling and appointments.
11. Causes

**Problem:** Patient’s don’t show up to doctor’s appointments.

* **Why?** Patients don’t keep note of the appointment date.
* **Why?** The patient sees the appointment as very far away and with little urgency.
* **Why?** Appointments are scheduled more than a week away.
* **Why?** Doctor’s offices usually have little efficiency in organizing appointments and informing the patients to get the smallest number of no-shows possible.
* **Why?** Many times, patients don’t fully understand the processes, due to the lack of information that they can access on their own without needing to call the office. Therefore, because of the lack of a website or app that patients can use to organize themselves as well.

1. Problem Background

* Doctor’s appointments are usually given at minimum a week from the day that they are scheduled, thus many patients forget about their appointments and don’t show up.
* A single phone call, usually days before, results useless in the case that the patient does not pick up. Therefore, the patient failed to be reminded of their upcoming appointment.
* According to [research realized in 2015](https://doi.org/10.1186/s12913-015-1243-z), 18.8% of patients don’t show up to their appointments.
* Furthermore, [a study published in 2009](https://www.amjmed.com/article/S0002-9343(10)00108-7/fulltext#relatedArticles) showed that 23.1% of patients result in no-shows when not reminded of their appointment, 17.3% don’t show up despite receiving an automated call, and 13.6% don’t show up despite receiving a reminder from staff.
* Not only are patients losing important appointments, but doctors are also wasting resources and appointment spaces on no-shows, and are ultimately losing money as well.

***Problem Solving (A3) Report***

Topic: **Doctor’s Office Calendar App**

Author: **Alaina N. Del Moral Martínez**

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