

Case Study 3

Bullzai, Inc.'s Medical Office Software as a Service (SaaS)

Bullzai, Inc. is a global medical-device and medical-office software company that specializes in the design and implementation of mobile software portals for medical-related services. The company serves a wide variety of clients, including hospitals, surgeons, lab technicians, and doctors. Bullzai, Inc. helps to improve the overall quality of people's lives by designing easy-to-use software for use on a mobile device. The company currently operates in 33 countries worldwide, including the United States, Japan, Canada, and the United Kingdom.

Bullzai, Inc. has a project in progress that focuses on upgrading its software to improve its ease of use and functionality. The project is planned for six months and started a month and a half ago.

The company has been having issues with its mobile service not filling prescriptions in a timely manner. Bullzai, Inc. wants to decrease the time customers spend waiting for prescriptions to be filled by notifying them via email when they are ready.

The second major upgrade for Bullzai, Inc.'s software is the addition of a module to provide highly requested new features for customers, including the ability to access medical records, set appointments, and manage existing appointments.

The third major component of the system upgrades relate to general system usability. Medical personnel and office staff often complain about the difficulties they have in navigating the separate systems.

Work Completed So Far

During the most recent three-week sprint, Bullzai, Inc. managed to improve software stability by addressing system memory leaks, which previously required a nightly reboot of the server. This improved stability is expected to encourage staff to use the new system features rather than the manual, paper-based workarounds they have been using. The first sprint added some user-adjustable style-sheet options. User stories C2 and C3 are complete.

Better Sprints Ahead

Maria Costa, a technical team lead, has met with some of the company leaders. The leaders have been impressed with how quickly the team rolled out the color accessibility changes and are looking forward to the increased speed and up-time that has been promised from the latest work. Maria reports, however, that the leaders are concerned some of the other features related to prescriptions and appointments aren't getting addressed.

Michael Turay is the senior software engineer on the project. He is the main contact person between software engineers and Maria. Michael runs the engineering team and makes sure the workload is split evenly among the engineers. Michael was out of the office for the final week of the most recent sprint. The team was able to successfully complete their work as he had communicated what they needed to complete before his absence.



There are also a couple areas of concern that the engineering team is unsure about. The following memo was sent by Michael Turay in the middle of the most recent sprint:

To: Maria

From: Michael

Hey, I just wanted to touch base with you as far as progress goes and make sure you are aware of several issues we are encountering so that I don't forget to tell you about them after I get back into the office. Remember that I'm out next week.

A major area of discussion is whether or not the mobile device software will be able to function correctly on both Android systems and the iOS. Right now, our team has only developed our software to be functional on Android devices.

The other major area of concern is the extensive amount of time it has been taking on the mobile-device software to process prescription refills. When we finish the new modules, the load times may double or more because of the need to now access medical records, check for appointment openings, and make new appointments.

We should brainstorm when I get back on whether some of that training HR was offering might be helpful. Most of the time the team is working well together, but we've had a couple times where disagreements between engineers devolved our meeting into a shouting match. In addition, there were some misunderstandings about the scope of the first sprint, which almost caused us to not pass QA. I finally figured out it wasn't a problem with our sprint plan, but rather a sales manager (I'm sure you can guess who) had pushed one of the engineers into working on something that was out of scope and caused the versioning conflicts we saw.

I just want you to be aware of some of the issues we are encountering. I need to hear back from you soon on our plan of action going forward.

Thanks.

Bullzai Web Complaint #1080 :: Customer Malik Thomas

To: bullzaicustomerservice@gmail.com

From: malikthomas@gmail.com

Hello. I am writing to complain about your prescription service.

When I go to fill my prescription on your service, I check out and pay, and then it takes over two hours to get an email confirmation that my order was filled. This is way too long, and I spend personal time out of my day waiting to see if my order was filled. Would you please correct this ASAP?



Bullzai Web Complaint #1082 :: Customer Li Kim

From: Li Kim

Your service does not have the ability to display my medical records for easy or emergency access, nor does the service have the option of letting me book doctor visits directly from the service.

Bullzai Tech Support Ticket #8319 :: Employee of Client Hannah Martin

Hello Hannah Martin (HM). You have been connected with tech support specialist Lulu Yoshida (LY).

LY: Hello Hannah. What can I help you with today?

HM: Hi. I have a problem with the data entry screens that keep losing my data.

LY: I'm sorry that you're having a problem with the data entry screens. What is your role with your company, and can you describe for me what the problem looks like to you?

HM: Yes, I am an office specialist at the Greater Regional Hospital. Something that happens all the time is that I will be in the middle of entering lab results for one patient and another patient will come up and ask about their next appointment. I will switch to the other screen for the appointment data, and when I go back to the first screen, all the lab results I had entered are deleted.

LY: Oh yes, I have heard of this issue before. The way the system was designed, it does not save anything you enter unless you actually hit the save button. This is to avoid having data from one patient saved under a different patient's record if you switch between patients.

HM: So it deletes my data on purpose? That doesn't sound very helpful.

LY: Well, I wouldn't say it deletes it on purpose. It's just that it is designed that you work on a task at a time. If you are switching between multiple patients or screens, you will want to finish what you are working on and save before switching.

HM: That's hard because with as many patients as we have always asking us things, switching around to different systems is a big part of what I do.

LY: I can see how that would be difficult. Let me pass your concerns along to my supervisor who can have the development team look into how this all works with some system updates they have been talking about.

HM: That would be amazing if they could fix this. Thank you.



Current Product Backlog

Epic	Description
A	Patient Appointment Management
B	Patient Prescriptions
C	System User Interface

"Difficulty" is on a scale of 1–10, where 1 is the most difficult and 10 is the easiest.

"Customer priority" is on a scale of 1–10, where 1 is the lowest priority and 10 is the highest priority.

"Score" is on a scale of 1–100, where the higher the number, the sooner it should be addressed.

Epic	User story	Item	Difficulty	Customer priority	Score
A	1	As an office administrator, I want to view past appointments so I can determine the patients' needs.	7	4	28
A	2	As an office administrator, I want to be able to cancel appointments so I can help patients who need to cancel their appointments.	6	6	36
A	3	As an office administrator, I want to be able to view upcoming appointments so I can let a patient know the date of the next appointment.	7	6	42
A	4	As a patient, I can book appointments myself at any time so that I do not have to call to do so during office hours.	5	6	30
A	5	As a patient, I can view upcoming appointments so that I can either cancel or remember the appointment.	6	5	30
B	1	As a nurse, I want to view prescription dosage of current medications so I know what refills to order.	6	7	42
B	2	As a doctor, I want to view a list of current prescriptions so I can know what to prescribe.	5	8	40



B	3	As a nurse, I want to see an image of what the patient's medication will look like so I can let the patient know what to expect.	4	5	20
B	4	As a patient, I want to receive a notification when my prescription is ready so that I can pick it up at the pharmacy.	4	6	24
C	1	As an office administrator with a vision disability, I need to use the voiceover accessibility feature on my computer so that I can access patient data.	5	6	30
C	2	As an office administrator with a vision disability, I need to be able to adjust system colors so that I can read the text.	7	7	49
C	3	As a system user, I need the system to run full speed all day so I can get all my afternoon work completed.	6	9	54

