WebClinic
your diagnosis, here

Interactive Prototype Report

Team

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Problem and Solution Overview

Forty-nine million Americans are living without health insurance [2], which every year results in about 45,000 deaths [1]. These startling numbers help attest that more work must be done to provide more forms of health care to those living without health insurance. When a person is feeling ill or has a minor injury, it would be particular helpful if there was a tool with which a person could gain insight from a doctor about the health condition with no additional financial burden. WebClinic is one such tool; it is a tool that provides a person with no health insurance a place where they can describe their condition for a volunteer doctor to view, and get the appropriate care that the patient needs within a short time frame.

Tasks

1. Task 1 (Easy): Register a new user account
   Pretend as if you have never used WebClinic before and you want to register a new account.

2. Task 2 (Hard): Create a new case
   Imagine you are having a bad cough, a headache, and the chills. You are already logged onto WebClinic and you want to describe your conditions to be submitted to a doctor.

3. Task 3 (Medium): Check WebClinic e-mail

Imagine you are already logged onto WebClinic and you submitted a case three days ago. Read your WebClinic e-mail.
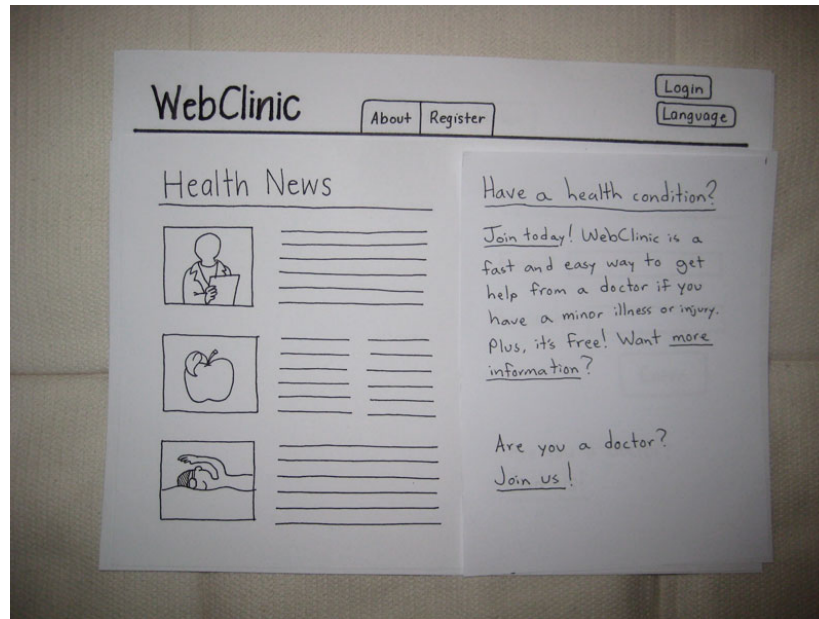
Interactive Revision Sketches

Figure 1

One of the first changes made was the removal of the log-in column at the home page of the site. Our user testing showed many users believed this to be the registration step when it was in fact the log-in step. Our change can be seen above where we change our home page to cater more towards new users instead of towards returning users.
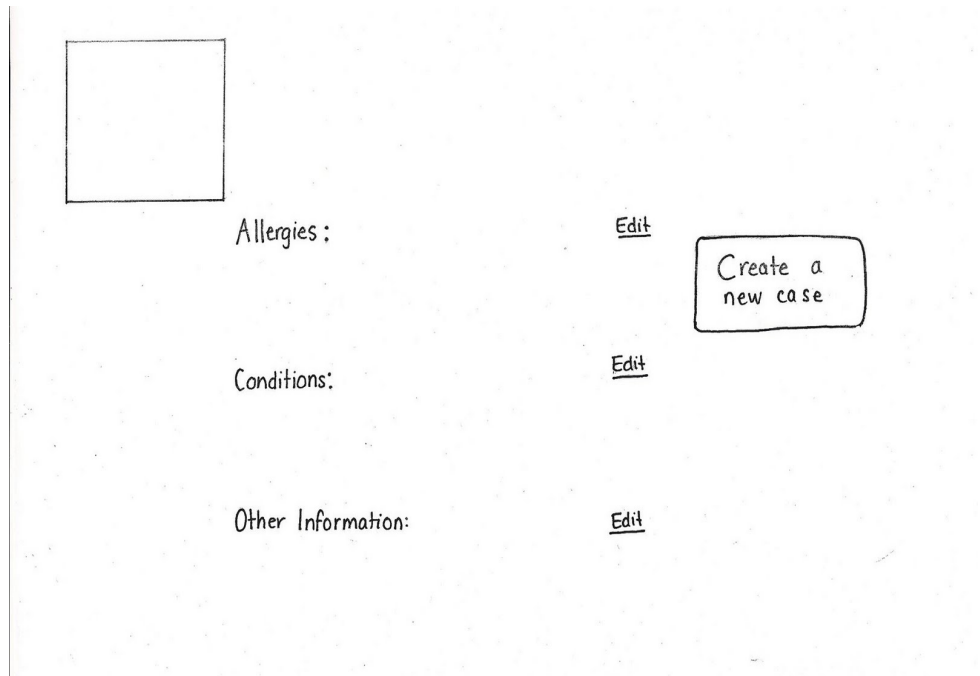
Allergies: Edit

                                                        Create a
                                                        new case

Conditions: Edit

Other Information: Edit

Figure 2

WebClinic   News | Profile | Inbox   Logout
                                                Language

Allergies:

Conditions: Create a
                                         new case
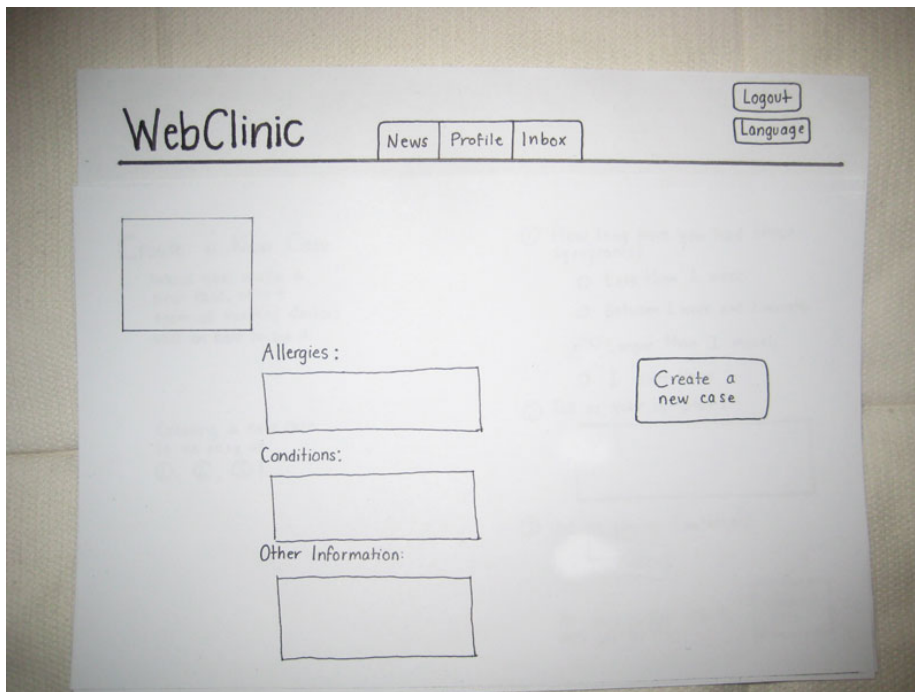
Other Information:

Figure 3

A change was also made to the user's profile page which confused some of our user testers. As seen in Figure 2, our original design for our profile page was three text fields which were modifiable when the user selected the Edit link. This proved to be confusing as there was no indication to our testers as to what the Edit link did or what it changed.

To make the profile page much more intuitive and simple, we changed the fields to always modifiable text fields in which the user can enter their details and have them automatically saved.
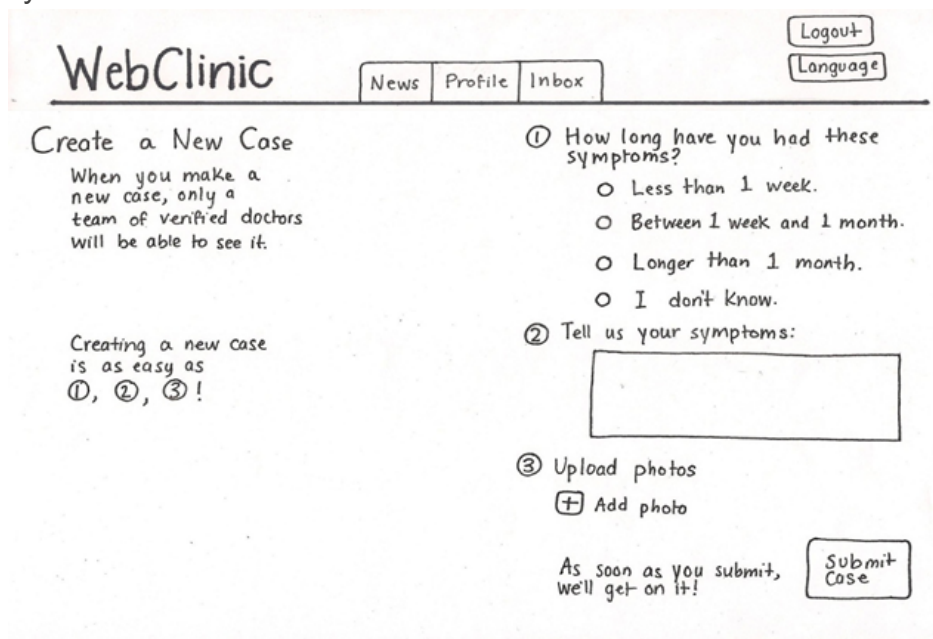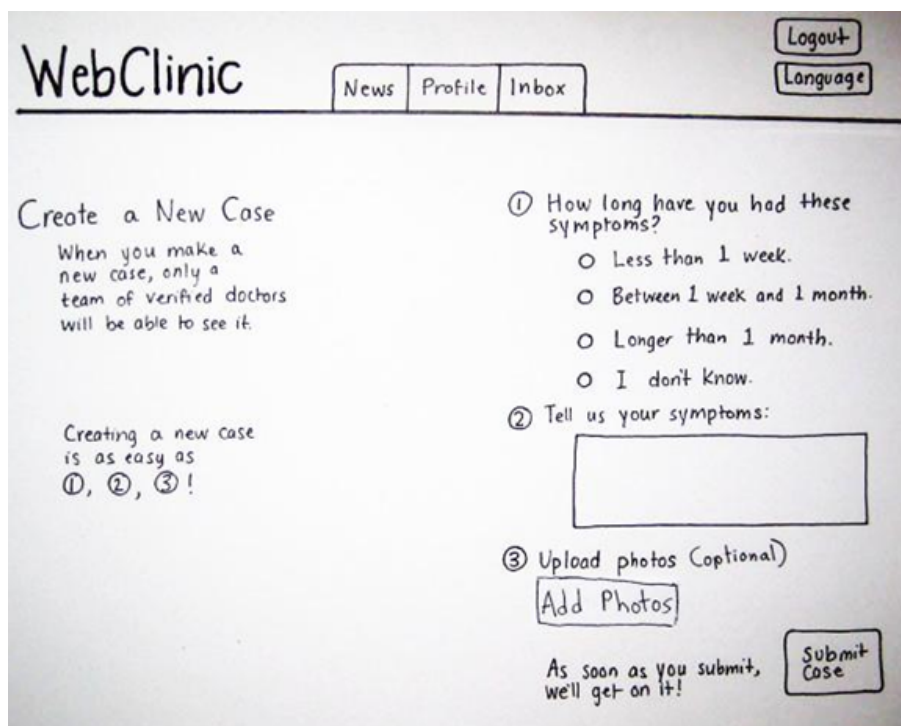

Figure 4

Figure 5

Although the original Create a New Case screen (figure 4) was generally easy to find and well-received, uploading a photo was confusing for most of the participants. They

were unsure whether to click the + sign or click "Add photo" or if they could just leave the field blank. We then decided to revise the screen such that the user could click an Add Photos button (figure 5) instead of the + sign that we previously had (figure 3). We also decided to add "(optional)" text beside the Upload photos feature because, based on user feedback, the user wasn't sure if uploading photos was necessary (especially when describing a non-visual related illness, such as describing a cold).
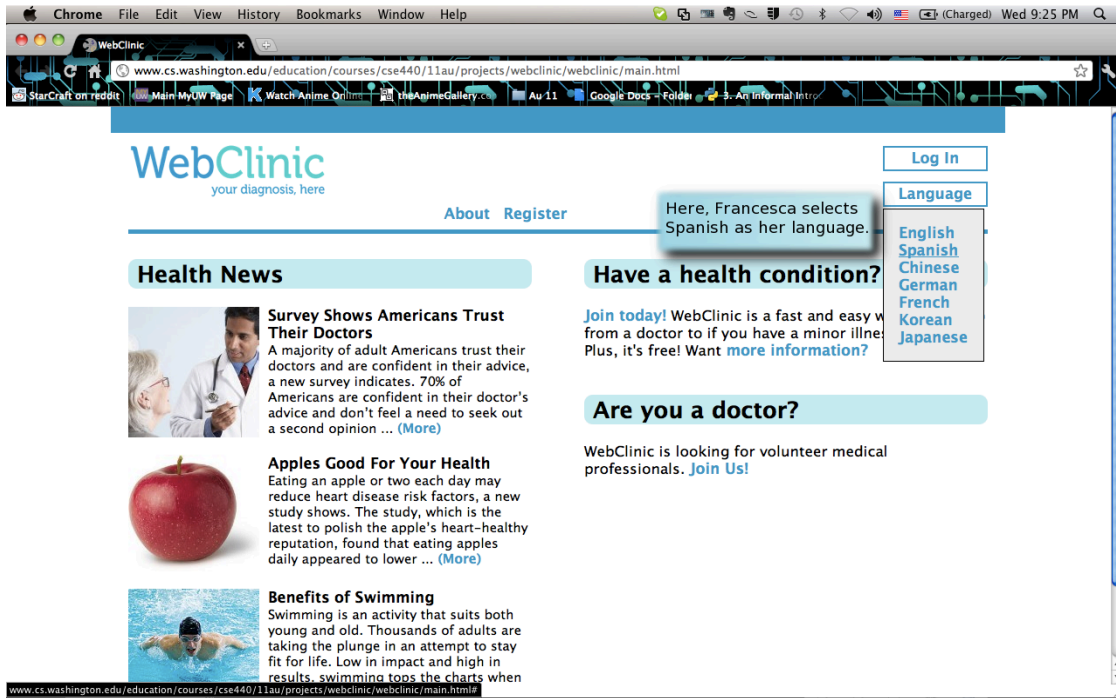
Prototype Overview

The interactive prototype was done with HTML, CSS, and Javascript (with jQuery) (See Figure 6 under Prototype Screenshots). Because the final product is a web application, creating a semi-functional website was the best option as it would be the most similar to the final product compared to other methods (such as Flash). One of the primary features of WebClinic is a simplified email service. Rather than attempt to implement a fully functional email system, our prototype fills the inbox with predetermined messages to mimic a functional version, ignoring the functionality to focus specifically on the design of our prototype (See Figure 9). Similarly, our home page would generally feature up-to-date news related to health and well-being of interest to our users. Here, predetermined news bullets are filled-in to better demonstrate the design of the site (See Figure 6).

Scenarios:

Scenario 1: Creating a WebClinic profile
Francesca, 24, is an immigrant resident, having only moved to the United States recently.
Her first language is Spanish and she does not speak much English. In the event that she gets ill, Francesca would prefer to speak with a Spanish speaking medical professional, but she doesn't know any in the area. Upon hearing about WebClinic's multilingual support, Francesca decides to create a profile on WebClinic. When she opens the website for the first time (in English by default), she sees the language option on the top of welcome homepage. She selects her preferred language as Spanish.

Here, Francesca selects Spanish as her language.

English
Spanish
Chinese
German
French
Korean
Japanese

All text on the website will change to Spanish.

Francesca fills out her registration info including her name, age, e-mail, language, sex, and prior health information. She reads the privacy release and submits after checking the agree checkbox.

Next, Francesca continues by clicking the Register button. She reads about how WebClinic works, and fills out the form with her name, gender, date of birth, information about past and current conditions, her email and new password, language preference, and submits this information.

Having just created her WebClinic account, she is now brought to her newly populated profile page. Francesca notices a blank default photo is currently assigned to her profile; she clicks on the default photo to upload her own photo. She also notices
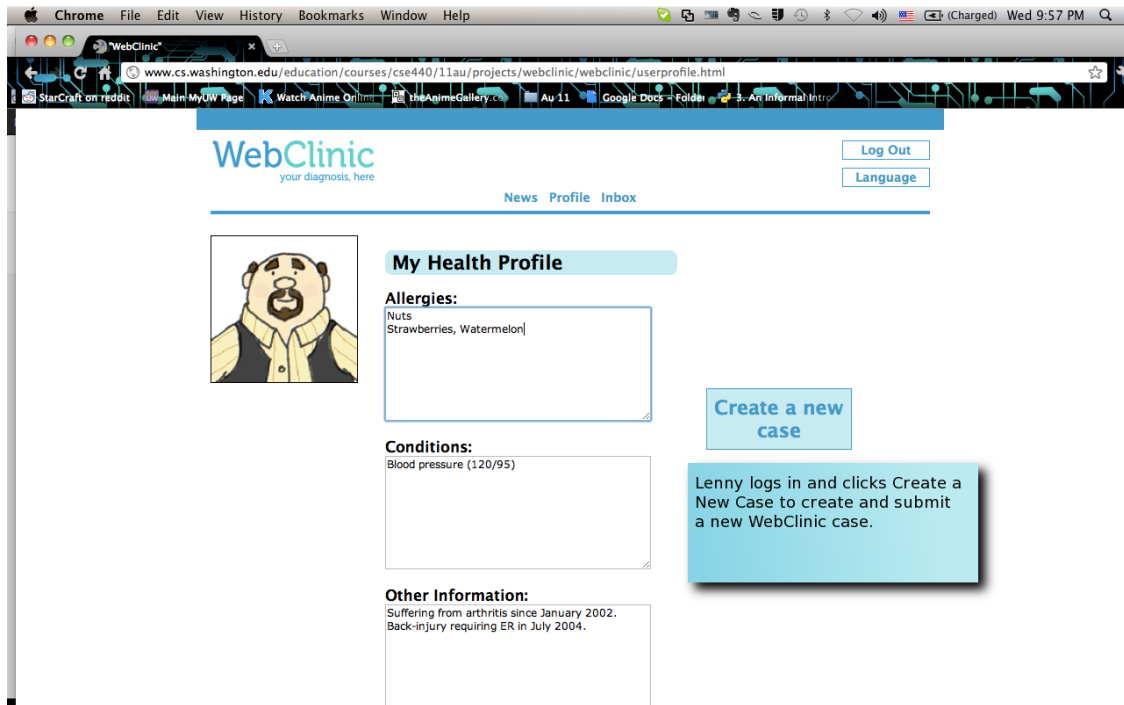
a news tab on her profile page and clicks on it also. With all the text in Spanish, Francesca finds it easy to interact with WebClinic and access a wealth of health resources whenever she logs in.
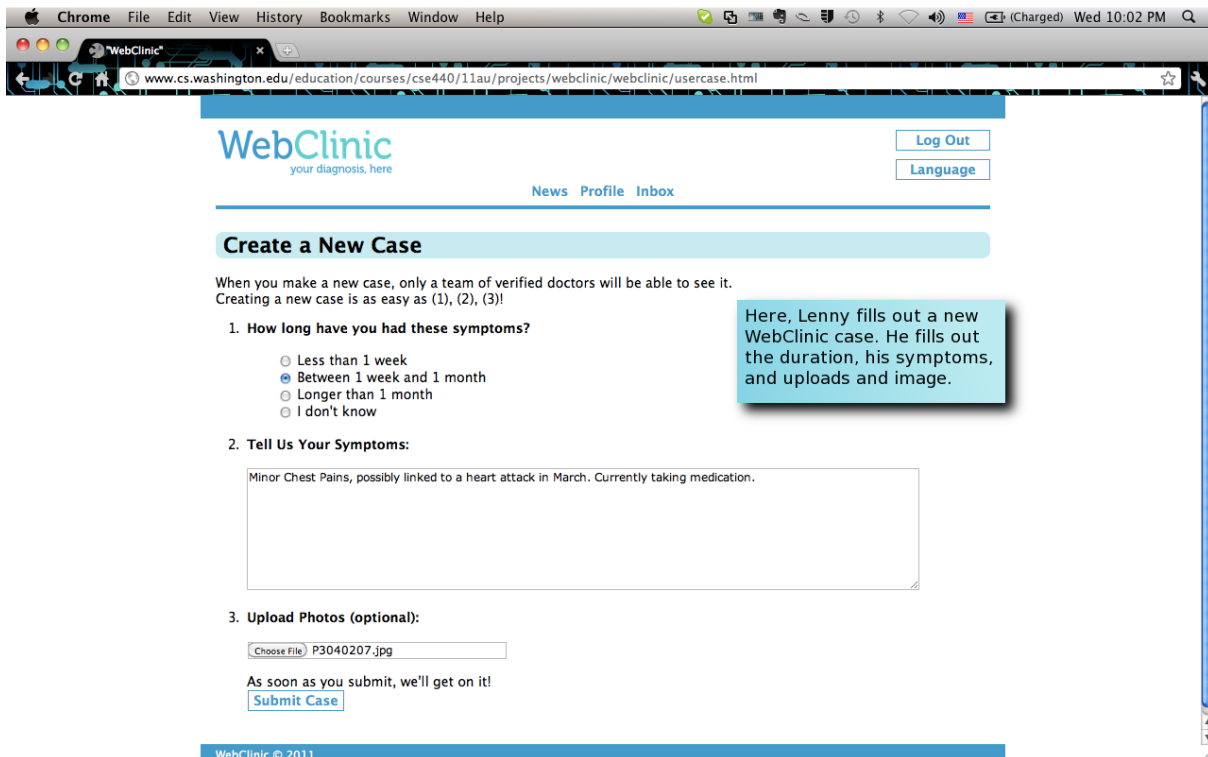

Scenario 2: Creating and submitting a new case

Lenny, 42, is a middle-aged man who works long, stressful hours at work every day. He has noticed some minor chest pains recently. A while ago Lenny suffered a heart attack, and is now taking some medications. He is not sure if these current chest pains are temporary or if they're a sign of something more serious, but does not want to go through the trouble of setting up a doctor appointment.

Lenny remembers that he has previously created an account on WebClinic, so he logs onto his account. Logging in brings him to his personal home page. Lenny clicks on his "Profile" tab. In his profile, he clicks "Create a new case".

He is now brought to the Create a New Case form. Following the question fields, Lenny indicates how long he's experienced these chest pains. In the symptom box, he enters his symptoms (aided by autosuggest) and describes his past heart history. He also takes a photograph of himself and marks the area where he feels the pain, and uploads this photo to the form. After verifying all the information, he submits his case.
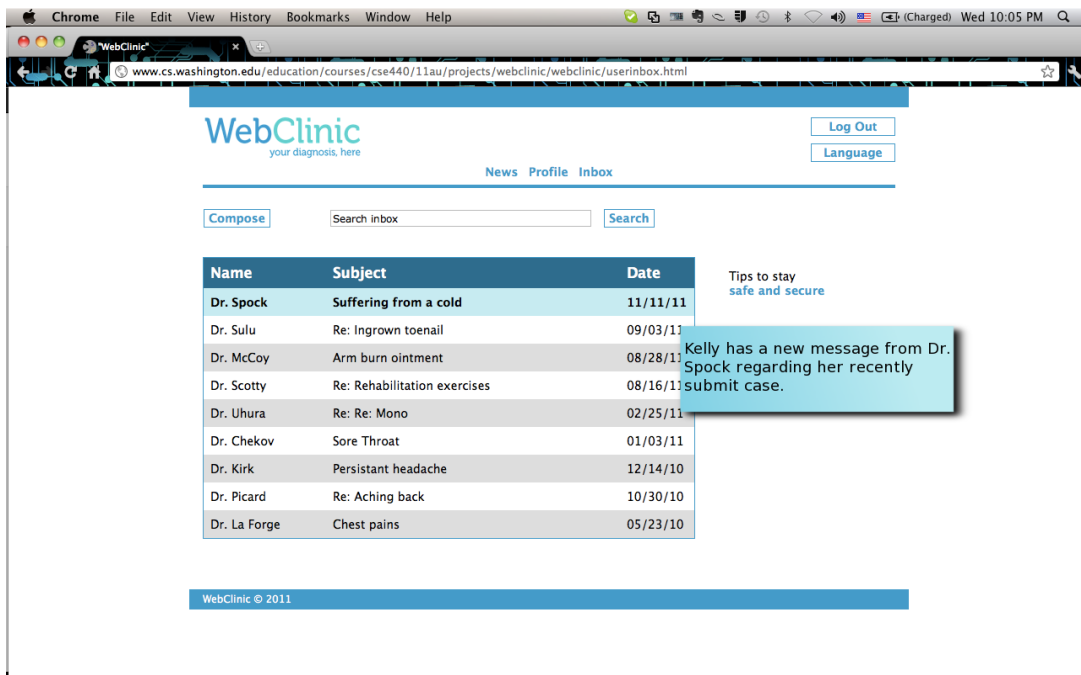
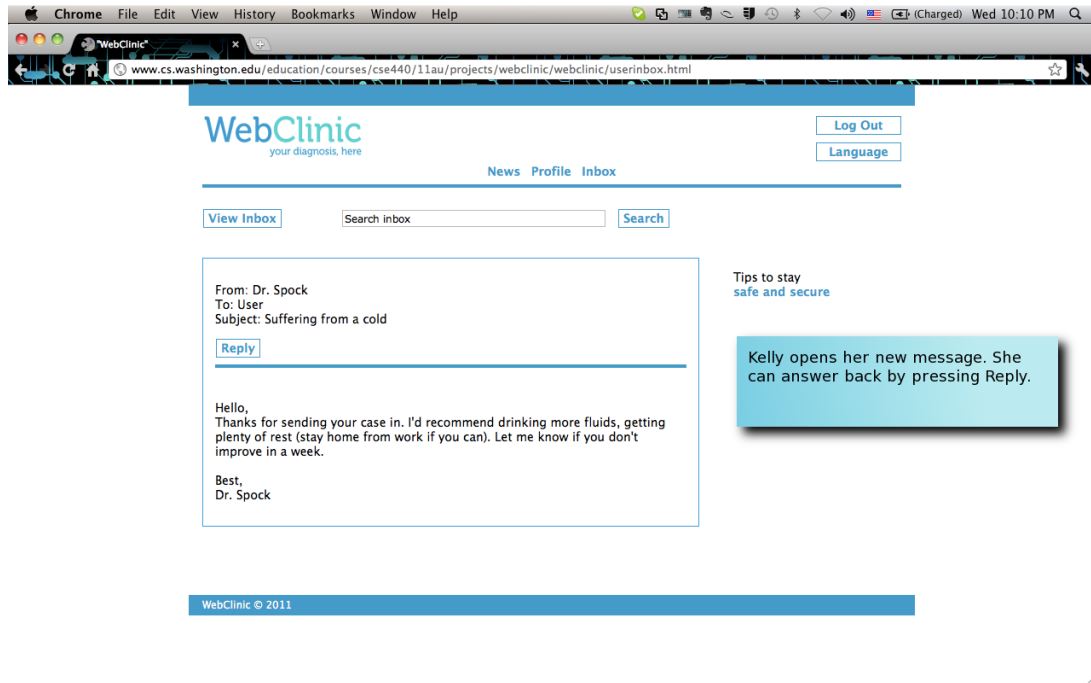WebClinic assures him that his case will be reviewed quickly.

Scenario 3: Following up on doctor's reply on submitted case
Kelly, 35, is a middle-class citizen of modest income. She was injured recently on a rock climbing trip and sprained her ankle. Even though she rested for a few days, she notices that her foot is discolored, swelling, and still in pain. Kelly finds that she's unable to put any pressure on this foot and it is hampering her ability to move or do work. However, she has no health insurance and no way to pay the medical bill, if she were to visit a doctor. Because of this, Kelly has used WebClinic to receive advice for her sprain.

Kelly has now just received an email notification from WebClinic letting her know that her submitted case has been reviewed by a doctor. So she logs on to WebClinic again and clicks the "Inbox" tab. The new unread reply is listed at the top and Kelly opens it.

The doctor has further questions about her foot.

Kelly starts writing a reply to this conversation and sends her response. Kelly marvels that WebClinic's mailbox system is similar to her usual email account and finds it easy and secure to use.

Tools:
The interactive prototype was coded with just a text editor (such as Vim) and tested directly through a browser. The tools were easy to access and use and required little to no documentation to use in order to create our prototype. On the other hand, the tools are simplistic and did not provide any framework or scaffolding to simplify the prototype and thus required everything in the prototype to be coded and tested by hand.

Future Work:
Currently, no design was constructed for the volunteer doctors who are our supporting users that our service is powered by. Designs were left out because creating an interface for the doctors requires much more integration with a system including verification for their license, functions to map specific cases to doctors with the right proficiencies (such as language, medical specialty, location, time). The design would also prove to be difficult to test given the limited amount of time as well as the challenge of finding accredited users that have time to spare. We concluded that because our application's primary users would be patients, we would design our application specifically for them and leave the interface for the doctors as future work.

Wizard of Oz:
No wizard of oz techniques are required to use the prototype. The output are pre-

scripted and mimic a pre-selected example scenario for users to walk-through and demo. When using the prototype, field values are not saved nor processed so tasks such as registration and filling out text fields are not verified and are accepted regardless for the purposes of demonstration.

Prototype Screenshots

WebClinic
your diagnosis, here

About   Register

Health News

Survey Shows Americans Trust Their Doctors
A majority of adult Americans trust their doctors and are confident in their advice, a new survey indicates. 70% of Americans are confident in their doctor's advice and don't feel a need to seek out a second opinion ... **(More)**

Apples Good For Your Health
Eating an apple or two each day may reduce heart disease risk factors, a new study shows. The study, which is the latest to polish the apple's heart-healthy reputation, found that eating apples daily appeared to lower ... **(More)**

Benefits of Swimming
Swimming is an activity that suits both young and old. Thousands of adults are taking the plunge in an attempt to stay fit for life. Low in impact and high in results, swimming tops the charts when it comes to exercise ... **(More)**

Have a health condition?

Join today! WebClinic is a fast and easy way to get help from a doctor to if you have a minor illness or injury. Plus, it's free! Want **more information?**

Are you a doctor?

WebClinic is looking for volunteer medical professionals. **Join Us!**

WebClinic © 2011

Figure 6

WebClinic
your diagnosis, here

About Register

What We Do

WebClinic is a free medical application that connects patients with volunteer doctors. We provide a simple to use, medical case creation process with which any user can create a medical case, list their symptoms, and submit it for review by a doctor.

WebClinic also provides a free, simplified e-mail system for users to communicate with the doctor reading their case and receive direct medical consulting for free.

Register today!

Hello! We're here to help you.
But first, please provide us some basic information:

First Name:

Last Name:

Birthdate:
January   1   2011

E-mail address:

Enter a new password:

Language:
English

Gender:
Male Female

Information and History
Describe your prior and current health conditions.

Privacy Release

PRIVACY RELEASE FORM

WebClinic understands how important the privacy of personal information is to our users. This Privacy Policy will tell you what information we collect about you and about your use of WebClinic and its services. It will explain the

I agree

Submit Cancel

WebClinic © 2011

Figure 7

WebClinic
your diagnosis, here

News   Profile   Inbox

Create a New Case

When you make a new case, only a team of verified doctors will be able to see it.
Creating a new case is as easy as (1), (2), (3)!

1. **How long have you had these symptoms?**

   ○ Less than 1 week
   ○ Between 1 week and 1 month
   ○ Longer than 1 month
   ○ I don't know

2. **Tell Us Your Symptoms:**

3. **Upload Photos (optional):**

   [ ] Browse...

   As soon as you submit, we'll get on it!
   Submit Case

Figure 8

Figure 9

References

1. Becker, Gay. "Deadly Inequality in the Health Care "safety Net": Uninsured Ethnic Minorities' Struggle to Live with Life-Threatening Illnesses." Medical Anthropology Quarterly. 18.2 (2004): 258-275. Print.

2. Bureau of Primary Health Care. 1998 Uniform Data System. Bethesda, MD: Bureau of Primary Health Care/Health Resources and Services Administration, U.S. Department of Health and Human Services. Print.