

HCI Project 2022

Shifaa Website

Group B

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APRIL 16

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Contents

Introduction	3
Data Gathering	4
Targeted Users.....	4
Persona 1.....	4
Persona 2.....	5
Research Methods	5
Questionnaires.....	6
Observation.....	6
Data Gathering Results	6
Questionnaires	6
Observation.....	12
Comparison	13
Storyboard.....	27
Conclusion	32
Links:	32

Name	Task
Yosef Alshamrani	Write a report, Data analysis, brainstorming
Taha Alhasani	Write a report, brainstorming
Yousef Alsayegh	Write a report, write the form, observations, brainstorming, linguistic check
Abdullah Fadaq	Observations, brainstorming

Sami Ismail	Write a report, observations, brainstorming
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Introduction

About project

Interaction with technology has become an essential part of our daily life, which made Human-Computer interaction important to learn, Human-Computer interaction aims to make a good interaction between the system and the user, and to design a good system, we must put people's needs first, so we want the user to feel comfortable when he uses our system and make it easy for the user to use and learn how to use the system, and that is a very important thing to make loyal users and earn users trust, which will make the system more successful.

“People needs, capabilities and preferences should come first.”

Problem description

As one of us once tried to book an appointment in the university hospital to be eligible for the benefits from being a student. He was faced with a myriad amount of issues on the 'shifaa' website which made it difficult to schedule an appointment for his illness. This could lead to dire consequences since some illnesses would require immediate medical attention

Project goal

our project aims to make changes to the “Shifaa” website to make it more efficient, learnable, and we want to make sure that the user will interact with the system in a way that makes it easier for the user to use the system and achieve their goals while they use this system, we will focus on important things such as learnability, efficiency, and effectiveness.

Data Gathering

Targeted Users

Our targeted users are all possible patients that seek medical assistance, especially the ones who used the university hospital website.

Persona 1

- Aziz wants to book an appointment for his little son because he had the flu, he is so concerned about his son, and it's his first time using shifaa's website so he opened it on his smartphone to book the appointment, he got confused so he scrolled down to try and find where he can book the appointment, he finally found the clinic scheduling option, so he clicked on select clinic name it opened a small drop-down menu, he got angry because he couldn't find the clinic he wanted, saying why can't I search for the clinic instead of scrolling through all the clinics, finally after he picked the clinic, he picked his son's regular checkup doctor's name and booked the appointment.
- Aziz wants to open a file so he opened shifaa's website to open it after he filled in all the information, he clicked on go back, then clicked on 'Check Open File Request Status' to his surprise it displayed an error page saying server error in '/' application, that bothered him because now he doesn't know if they opened a file for him or not.
- It's Sunday morning and Aziz works in Kau just got to work he sat in his office doing his usual work then at around 2:00 lunchtime his friend mike sat with him to eat their lunch, they started talking about covid and how many people are getting affected, mike mentioned about how shifaa has an emergency live section and how he sometimes checks how many are in a critical condition, Aziz went to check, he saw a red text in Arabic "الطوارئ الآن" he clicked it but nothing happened it didn't show up so he asked his friend mike about it he told him that it only shows if you changed the language to English.

Persona 2

- Mohammed was trying to download the shifaa app on his android device he didn't find it on google play, so he opened the website to download it from there but when he clicks on the download logo it does not let him download the app.
- One day Mohammed was talking to his friend Ahmed about health and fitness Ahmed said to Mohammed 'we should start getting on a diet', Mohammed 'said to him my weight is normal I don't need to go on a diet', Ahmed then asked, 'how do you know that your weight is normal?' Mohammed answered, 'I used the calculator on shifaa's website'. So, Ahmed opened the website he tried to find the calculator on the top bar but failed to find it there, so he scrolled down hoping to find it, after reaching the end of the page he found it, he entered his height and his weight then clicked calculate he was nervous thinking that he might be obese, but at the end, it turned out to be normal.
- One day Mohammed a student at Kau wanted to open a file in shifaa website, so he opened the website and saw the open file button, so he clicked it, then it displayed to him some list to choose from, he clicked on general, after that a pop-up display was opened that has the conditions he clicked ok, then he tried to fill the form he got confused to why they needed to know his religion but he moved on and continued to fill his information until he reached the last request, health affairs letter he didn't have and don't know how to get it so he canceled it to do it later.

Research Methods

This research aims to take users' opinions about the website and conclude a possible fix to those issues. We will use more than one approach to have a clear understanding suffering with while dealing with this website.

There are several ways to do research but each one has its advantages and disadvantages, so to make it more accurate we choose two research methods.

Data Gathering methods that we will use:

Questionnaires.

We use this method because we can reach a large number of people quickly and easily, we only write the questions that we want the users to answer and share online, also it is not time-consuming.

But the problem with this approach is that it is not accurate, so that is why we did two research methods.

Observation.

We used direct observation, to see if it is matched with the data that we got from the questionnaires, we talked with the users using discord then we made them do a share screen, then we watch them using the website and, we gave them some tasks to do, then noted down their observations.

Data Gathering Results

Questionnaires

We did the Questionnaires first, We concluded that the majority of people using the website fall under 21-25 years old, which in turn shows that the target demographic are young adults that are either students or starting their career experience.

We have 86.7% Males and 13.3% are females, Another point that got brought up is the fact that most people using the website use it with their mobile phone which the current layout of the website isn't accommodated to since it is built with very long pages which requires a lot of scrolling to reach the desired service.

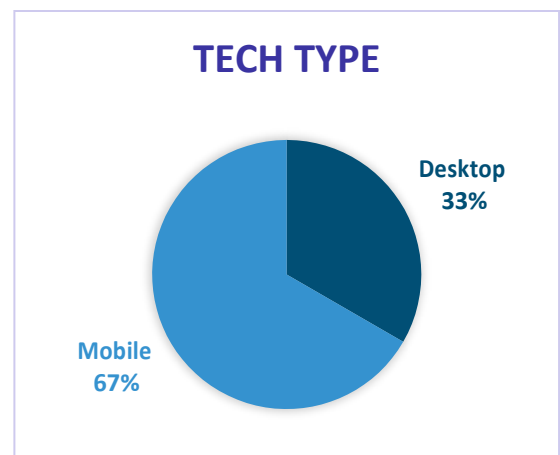


Figure 1, Tech Type Chart.

In the Questionnaire that we did, We asked the users some questions about the website, First question was **How hard was it to understand the user interface?**

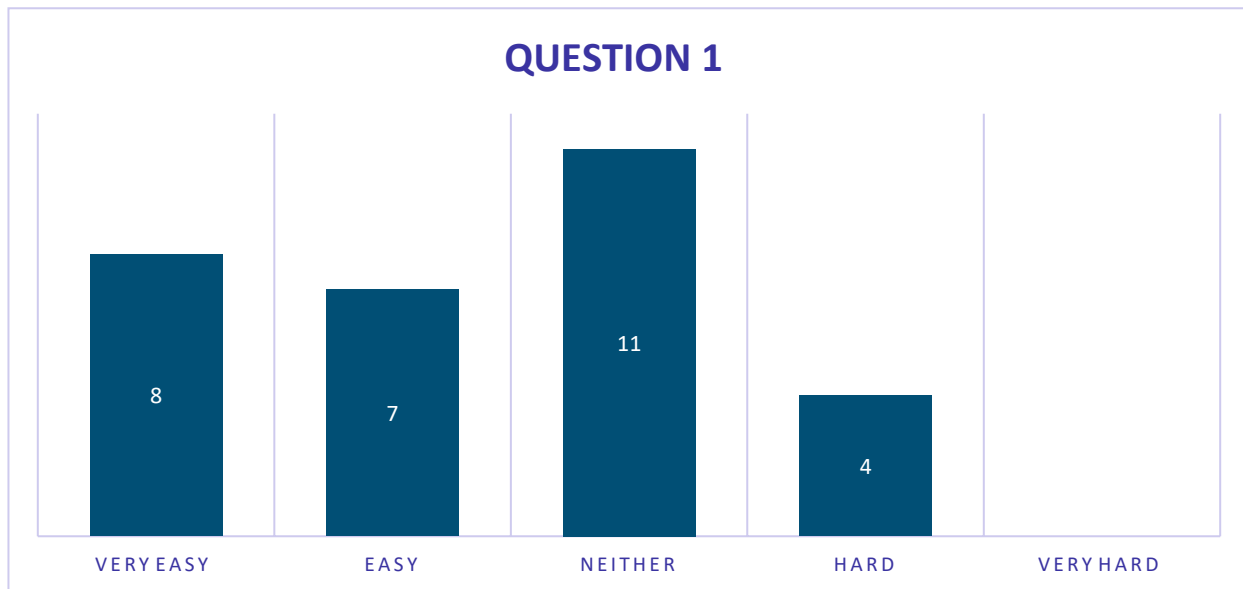


Figure 2, Question1 Chart.

As we can see 15 of them are fine with the user interface and see it easy to understand, and 4 of them are seeing it hard to use, while 11 are in between hard and easy, so we can reach to end which is half of them saw the user interface easy while the other 15 see it hard or between hard and easy, we want all users to find the user interface between easy and very easy, so we also asked the ones who answers from 3 to 5 to give a reason why it is not fine for them, and their answers was:

1. Very confusing and clunky.
2. The services are unordered which makes it harder to find the service that I want, also it is hard to know what this website provides.
3. The words on the website cannot be understood without thinking, it should be clearer and easier.
4. Unordered and unclear.

And to make the interface more successful we need to fulfill all the needs of the users, as we know “People Comes First”, so if we solve all these problems, we think all of them will see it easy and very easy.

The second Question in the questionnaire that we did was **How hard was it to open a patient file?**

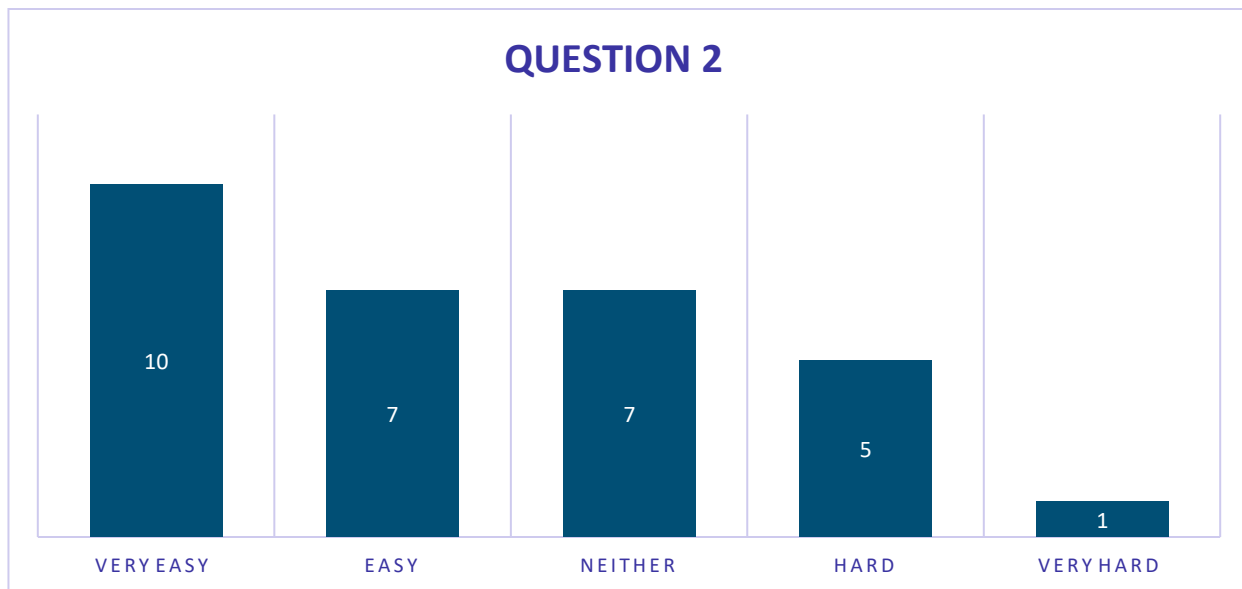


Figure 3, Question2 Chart

And here we can see that 56.6% are between easy and very easy we can say 56.6% are fine with that, but we cannot ignore that 43.4% are not fine with opening patient files, so it means we need to do something here to make the percentage towards easy and very easy at least by 85%.

The third question that we asked, after asking them about how easy was opening a file for them, we attempted to ask them about the things that were asked from the website to open a file, and the question was **How hard was getting information and inquiries regarding opening a patient file?**

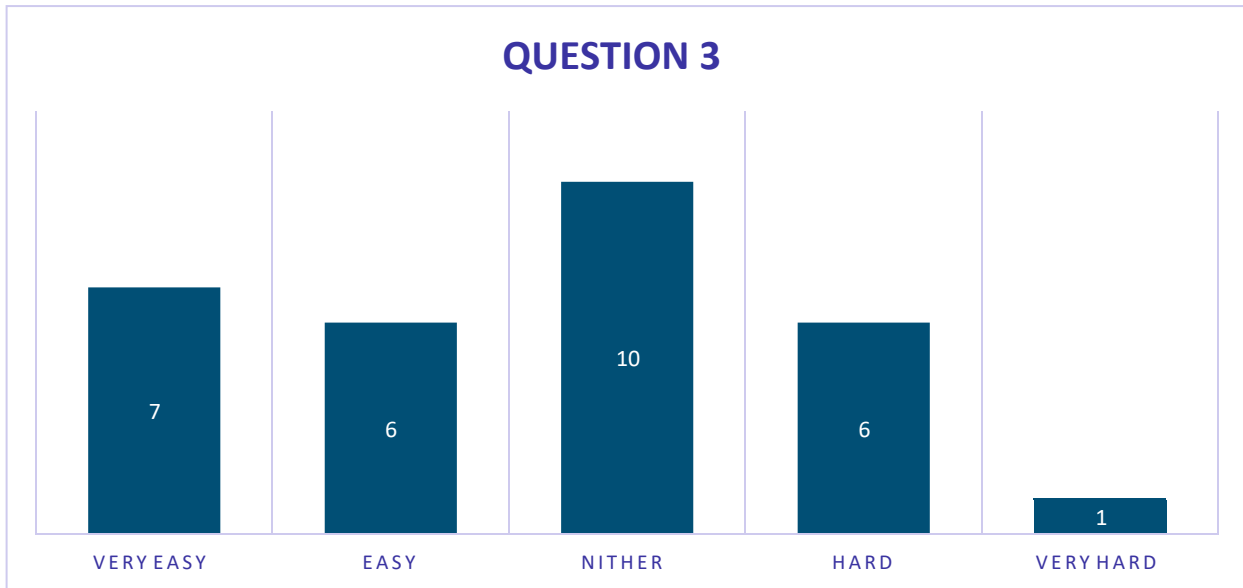


Figure 4, Question3 Chart.

Also, the answers to this question have a high percentage showing that there is a lot of them seeing it hard for them to get the information needed to open a file, and that is a problem we need to fix, 43.3% of them choose easy and very easy, while the rest are not fine with it.

The fourth Question was **How hard was it to find the specific service you need?**

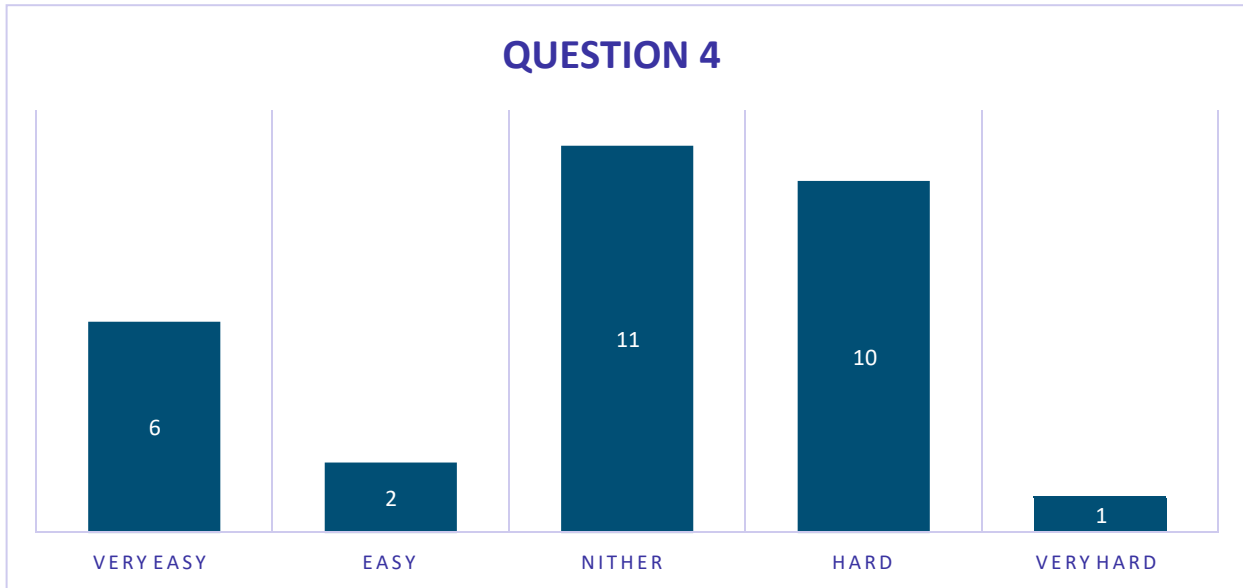


Figure 5, Question4 Chart.

Here in this Question, we can see the difference in the answers, which make us think about this problem is the most important problem that we need to solve, only 26.7% of them said it is between easy and very easy, while the rest of them are not fine with it, and they represent a large proportion, so we need to consider this problem as an important one.

The fifth question was about the appointments, we asked them **How hard is it to book an appointment on the website?**

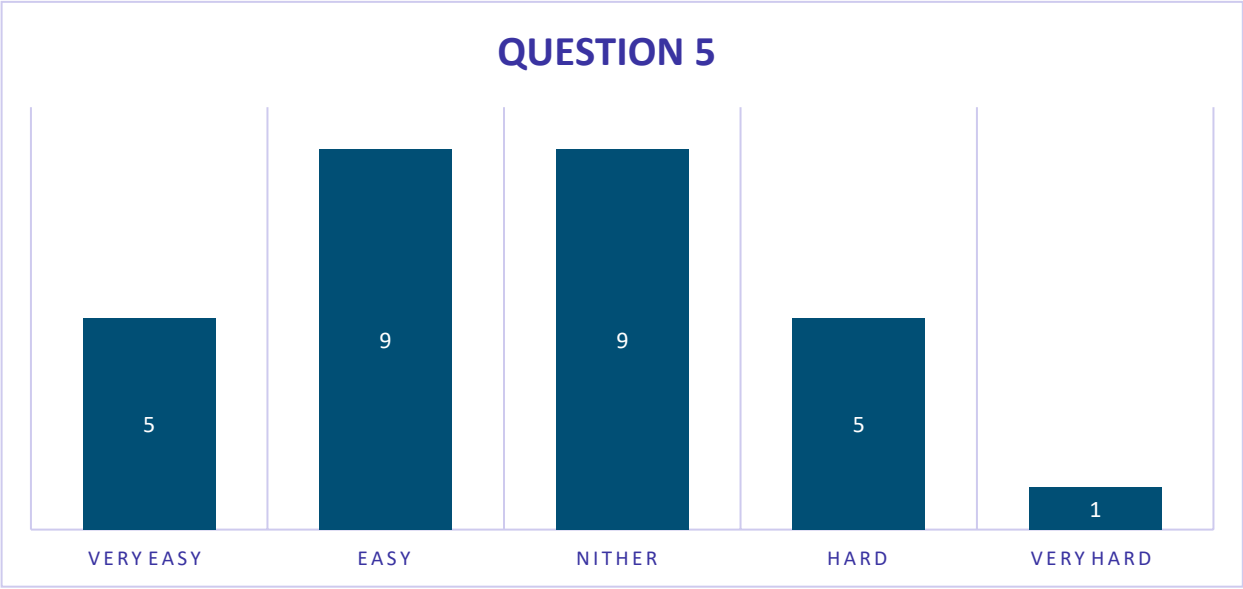


Figure 6, Question5 Chart

Here in this question, we can see there is no big difference between the ones who choose easy or very easy and the others, but we also need to improve this problem so all of them can see it easy or very easy.

That is mean we need to make some changes to appointment booking to make them all agree that it is easy to book an appointment and to achieve this goal we need to ask some of them about why they are not fine with booking an appointment.

The fifth question that we asked was **can you download the application from the website?**

Because we want to make sure that the application is working for all users, and the answers that we have got was:

The answers tell us that there is a problem with the application, more than half of the users cannot download it, so we need to do some changes here and make it better.

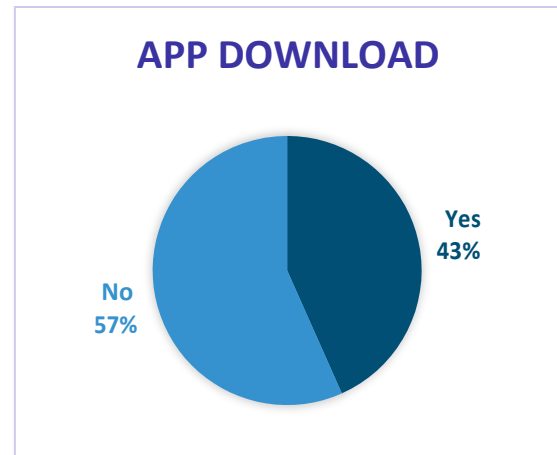


Figure 7, Question6 Chart.

The seventh question was **What suggestion would you give to enhance the experience of using the website?** And they gave us a lot of suggestions.

1. Making the website simpler in design and displaying information and available services would be a great enhancement.
2. a lot of graphical changes.
3. Make the services that the website provides clearer and make them easy to reach.
4. Better user interface.
5. Suitable interface for mobiles.

These are the most requested changes and additions that we have got from the users to make the website better.

Observation

we conducted 15 observations, using the discord platform to be able to share the screen with the users, to see their first impression of the website, and to give them a specific task to do, while noting down what happened with them.

First Impressions:

Overall users found some features like the map and live emergency feed rather interesting. But most complained about the same issues some being that services tabs only have images of the specified services without any actual benefit, Also some features on the website lead to error pages or do not work as intended which shows a lack of professionalism which doesn't install trust and safety in the user while using the website, also when the user enters the website it opens the login screen, not the home page which makes the user thinks that he needs to log in first which is a bad impression.

Opening File:

After noting down some users' observations about opening a file we found that most users found the UI elements hard to follow which made the experience hard to complete. Also, some requirements the website asked for are not clear or explained to the user which might lead to incorrect data entry like the birthday isn't clear if the month should be numbers or letters, The registration boxes are not symmetric in the bottom half, Another major issue is that the website isn't localized properly to Arabic which is the mother language of most users.

Book an Appointment:

When users try to book an appointment, they get frustrated because it was not clear where to book an appointment since there is no clear indication about where they could find the scheduling, They think the appointment should have its own tab or

button to make it easier, another major issue is they are not sure which clinic to choose for illness since they have lacks medical expertise and would like help with it.

Reach emergency Services:

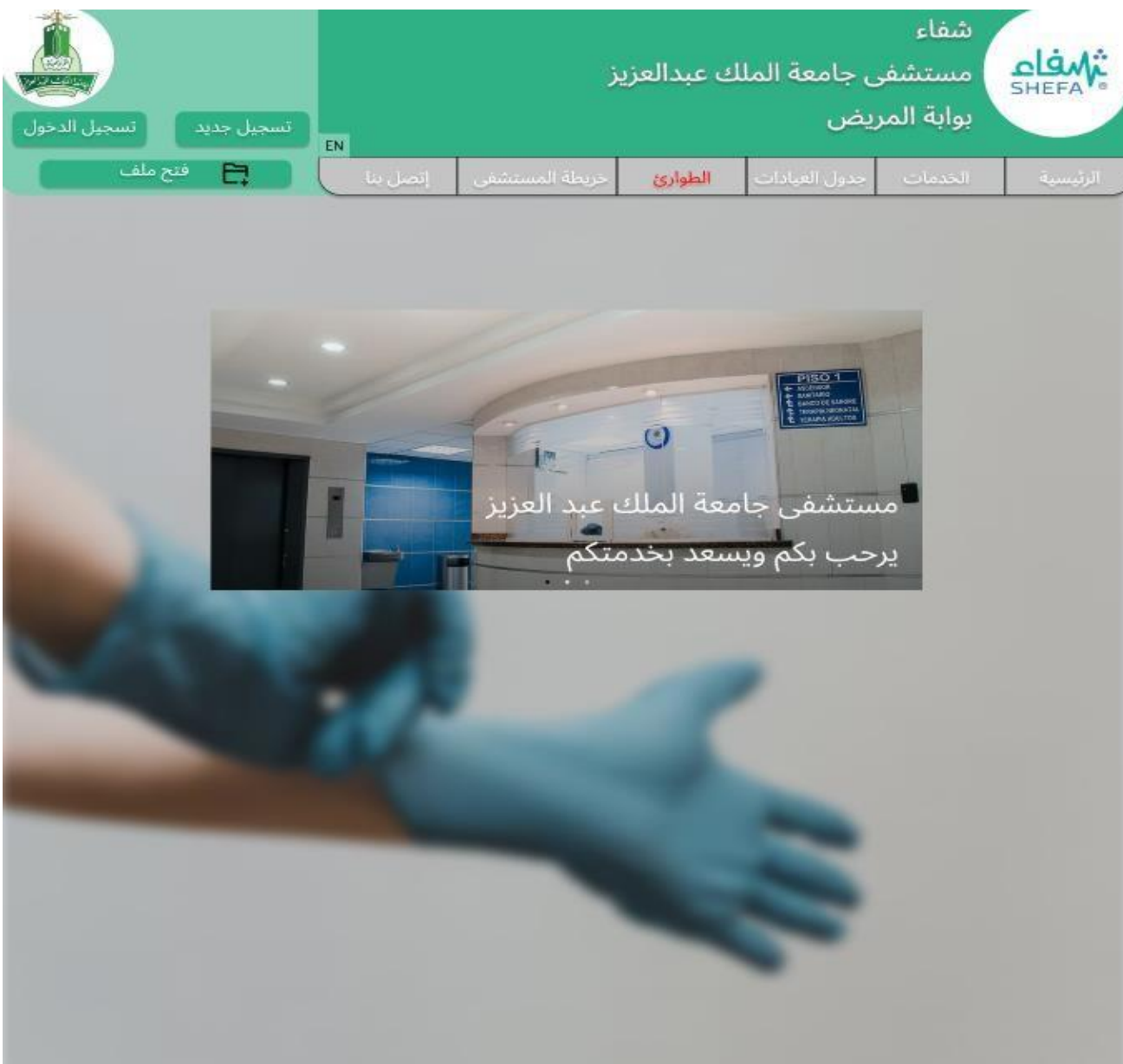
The users saw the emergency live idea is very good and helpful, but the emergency button needs the background to make it stand out and catch the user's intention. The red color is good to make it noticeable, a major issue that the users complained about is that there is no way to contact with emergency to get pieces of information.

Comparison

1. Before:



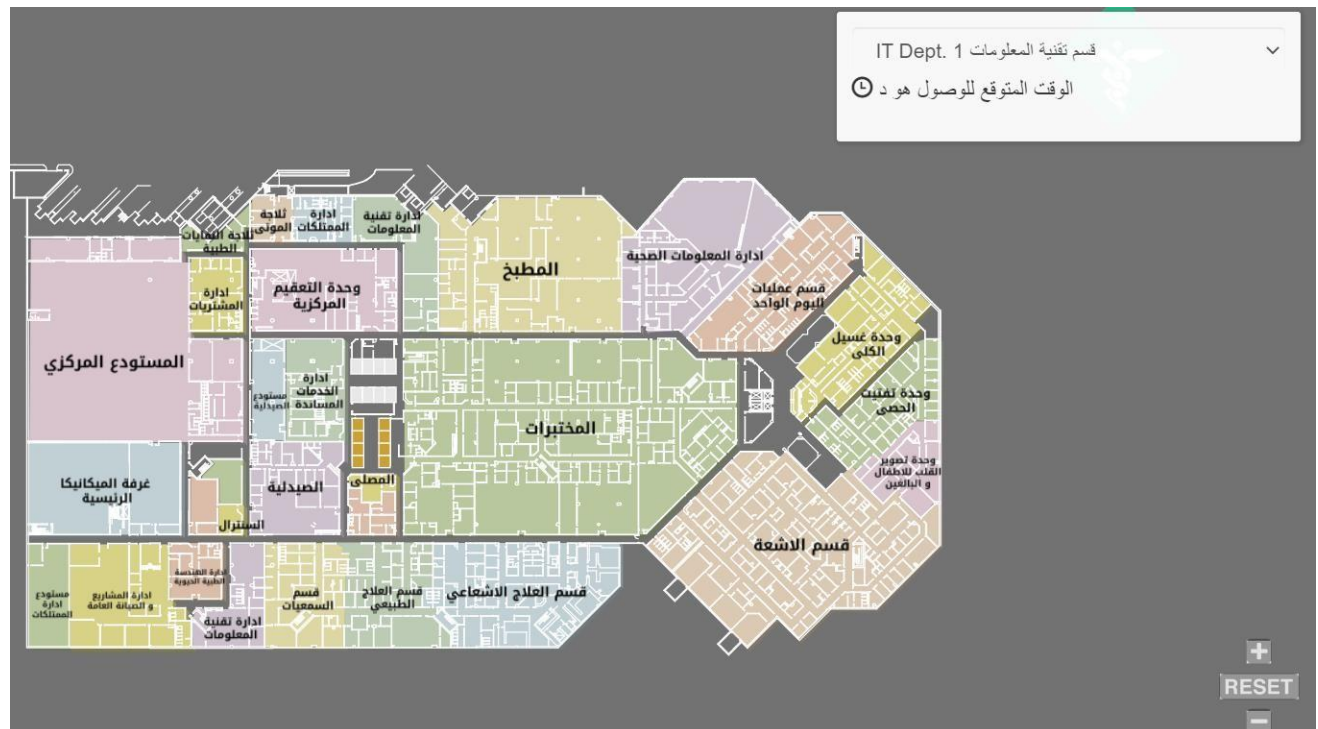
After:



Comment:

This the main page of the website, we made a lot of changes to it, we change the colors to make it better and clearer, before the page's colors was unrelated and bad to watch, so this the first thing that we changed, the other thing we made a global menu so the user can navigate the website easily at any page, also we changed the location of the sign in- sign up window, we make it at the top of the page like the most of the websites so the user can easily learn how to use the website, the window before was in front of the slide show making the slide show not clear and this is another reason for us to change the location of it, also the last thing we tried to fix here is the scrolling thing, before the user had to scroll endlessly to reach the end of the page, now we fix this problem by the global menu which make the user navigate the website easily.

2. Before:



The diagram is a comprehensive floor plan of the Shefa Hospital, illustrating the layout of its various departments and facilities. The plan is color-coded to distinguish between different functional areas:

- Central Core:** Includes the 'المختبرات' (Laboratory) in the center, 'وحدة التعقيم المركزية' (Central Sterilization Unit) to its left, and 'المطبخ' (Kitchen) to its right.
- Left Wing:** Features the 'المستودع المركزي' (Central Warehouse) and 'غرفة الميكانيكا الرئيسية' (Main Mechanical Room).
- Right Wing:** Contains the 'قسم الأشعة' (Radiology Department) and 'وحدة غسيل الكلوي' (Dialysis Unit).
- Bottom Section:** Includes the 'قسم العلاج الإشعاعي' (Radiotherapy Department), 'قسم الطب الباطني' (Internal Medicine Department), and 'قسم الجراح' (Surgery Department).
- Other Key Areas:** The 'إدارة المعلومات الصحية' (Health Information Management) is located at the top right, and the 'إدارة العمليات' (Operations Management) is at the top left.

The plan also shows various support areas like 'المستودع' (Warehouse), 'إدارة المشتريات' (Procurement Management), and 'إدارة المخزون' (Inventory Management).

This is the hospital's map page, as we can see before if the user click on the hospital's map button it opens a new window so the user cannot go back or navigate the website unless he closed the window by clicking the back button on the website, so we fix this thing by making it in the same window of the website so the user can navigate more easier, as we can see the global menu still at the top of the page, while before it was not there.

3. Before:



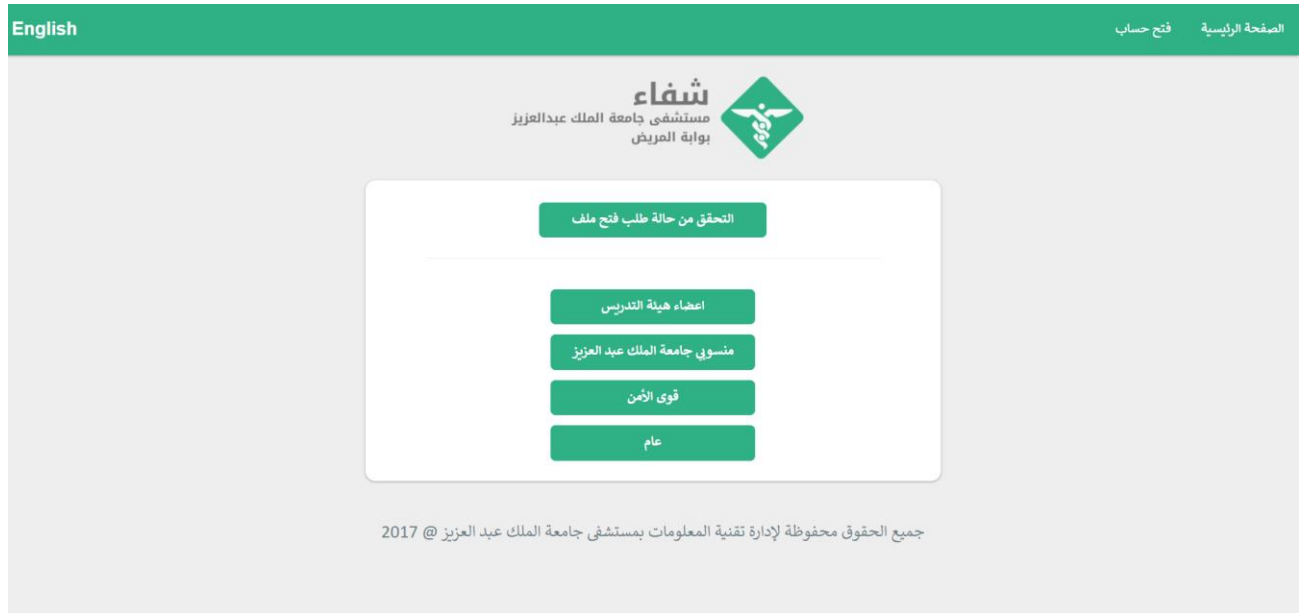
After:



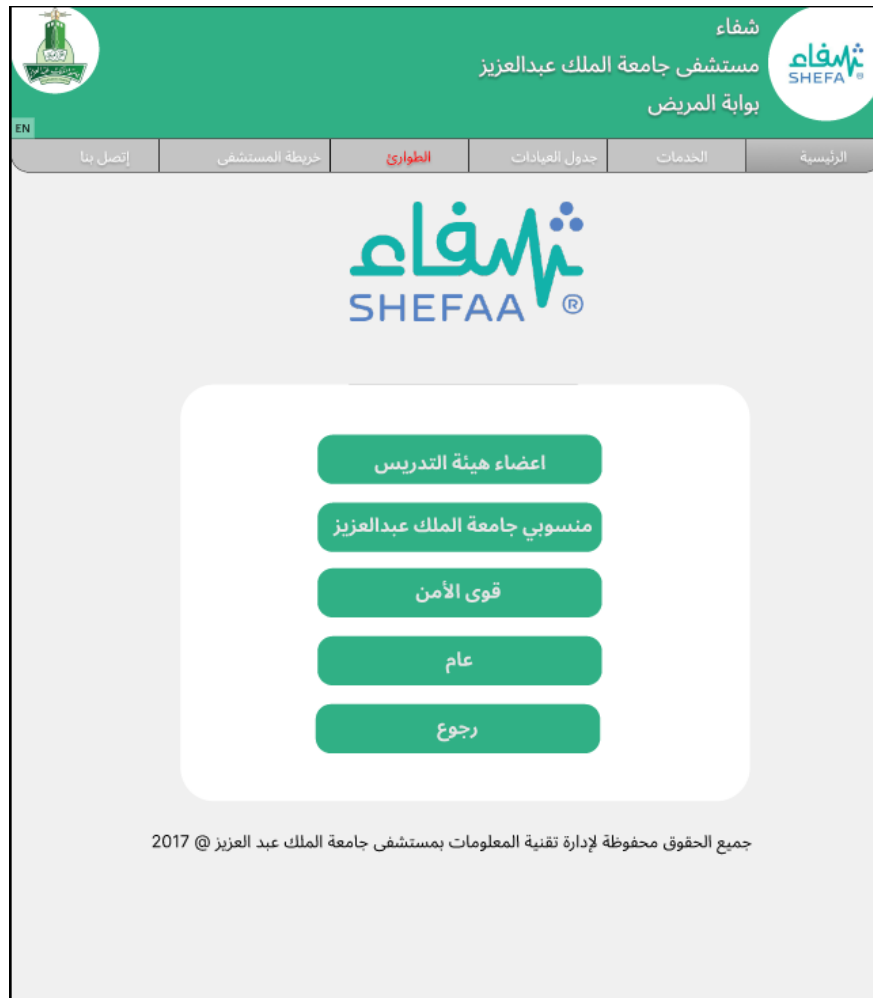
Comment:

Here we can see the difference between the two images, before if the user want to contact with the hospital he must scroll to the end of the page and then he can find the contact information, but we tried to make it easier to find by making a button for it so the user can click it and move to the contact page, also the hospital location if the user click on it google map will automatically open for him, the last thing we changed here is the app button, before the button was opening a new window which has error message, and there is no application for the hospital so we remove it.

4. Before:



After:



Comment:

we've made some changes to the open file page, we added the global menu on top of the page to make navigation in the website easier and removed the "Check Open File Request Status" button because when you click it, it brings an error page.

5. Before:

English الصفحة الرئيسية فتح حساب

شفاء مستشفى جامعة الملك عبد العزيز
وزارة الصحة

فتح ملف طبي جديد لأعضاء هيئة التدريس بالجامعة

جميع الحقول مطلوبة

رقم الهوية أو الإقامة

قم بإدخال رقم الهوية أو الإقامة هنا

الاسم (عربي)

اسم العائلة اسم الجيد اسم الأب اسم الأول

الاسم (إنجليزي)

اسم العائلة اسم الجيد اسم الأب اسم الأول

المنوان

الشارع

الحي

المدينة

معلومات الاتصال

التحولات

هاتف المنزل

الجنس

اختر هذا لإصدار الجنس

الحالة الاجتماعية

اختر هذا لإصدار الحالة الاجتماعية

تاريخ الميلاد - هجري

اليوم الشهر السنة

تاريخ الميلاد - ميلادي

الجنسية

اختر هذا لإصدار الجنسية

الدولة

اختر هذا لإصدار الدولة

اللغة المفضلة

اختر هذا لإصدار اللغة المفضلة

صورة الهوية

Select file

صورة بطاقة العمل

Select file

إقامة

Select file

إرسال الطلب

تمت

جميع الحقوق محفوظة لإدارة تقنية المعلومات بمستشفى جامعة الملك عبد العزيز © 2017

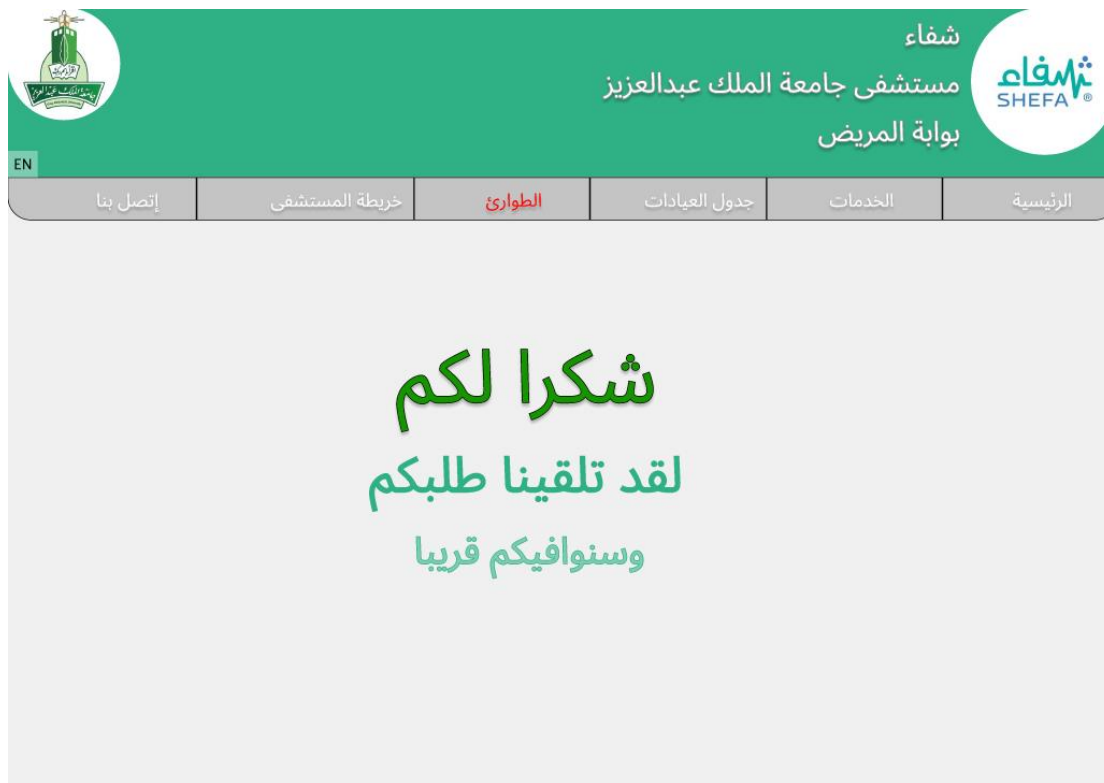
After:

The screenshot shows the 'Patient Portal' (بوابة المريض) of the 'Shefaa Hospital' (مستشفى جامعة الملك عبدالعزيز). The header includes the hospital's logo and name in Arabic and English (SHEFAA). A navigation bar contains links for 'Home' (الرئيسية), 'Services' (الخدمات), 'Appointment Schedules' (جدول العيادات), 'Emergency' (الطوارئ), 'Hospital Map' (خريطة المستشفى), and 'Contact Us' (اتصل بنا). The main content area is titled 'Open a new medical file for academic staff' (فتح ملف طبي جديد لأعضاء هيئة التدريس) and includes a red note: 'Any field with an asterisk * is required' (أي حقل عليه علامة * مطلوب). The form fields are organized into sections: 'Personal Information' (معلومات شخصية) with fields for ID number, name (Arabic and English), and gender; 'Contact Information' (معلومات التواصل) with fields for phone, email, and address; 'Date of Birth' (تاريخ الميلاد) with a date picker; 'Photo' (صورة الهوية) with a file upload button; 'Signature' (صورة بطاقة العمل) with a file upload button; and 'Nationality' (إدارة) with a dropdown menu. At the bottom, there are buttons for 'Send Request' (إرسال الطلب) and 'Cancel' (إلغاء). The footer states: 'All rights reserved. Information management system of King Abdulaziz University Hospital © 2017'.

Comment:

After selecting Academic staff, Kau staff, security forces, or generally from the previous page you get these pages to fill up your information they all have the same changes, we removed some unnecessary requirements like Religion, preferred language and Nationality (you are already required to submit your national ID), also we improved the date by making it a dropdown menu, it is simpler this way and faster, and we made it only Georgian date because it is the common date and to save time and effort for the user, also added a star "*" to everything that is required to be filled, finally we added the global menu.

6. After:



Comment:

When you fill in your information and click on “Send Request” this page will be displayed to confirm that you have sent your request and that you will have to wait until your request is accepted to open a file.

7. Before:

الطوارئ الآن



After:

شفاء
مستشفى جامعة الملك عبدالعزيز
بوابة المريض

الرئيسية الخدمات جدول العيادات الطوارئ خريطة المستشفى إتصل بنا

الطوارئ الآن

عدد المنتظرين	ساعات الانتظار
2	0
5	4
3	1
0	7
3	2

قسم طب الطوارئ بمستشفى جامعة الملك عبد العزيز
القواعد العامة

نظم طبي الكثرة من مرضاهم بسبب الأمراض المزمنة التي يشكون منها مثل السكري وأمراض القلب والسكري والسرطان. الله يتفهم جميعاً أعلم أخي المريض وأختي المريض أن كل المريض مثلك وحالتهم ليست أقل خطورة، لذا انتظر كم يتم بطريقة علمية تضمن سلامة الجميع وعدم تعرض أي موفد للخطر ولا سينتظري أحدهم قبل مريض آخر لأنهم كبار السن أو لأنهم يعتقدون أن حالتهم أكثر أهمية من بقية المرضى. توجههم إلى الانتظار هو علامة جيدة على أن حالتهم مستقرة، ولا يوجد خطر على حياتهم على عكس ما إذا تم نقلهم إلى وحدة العناية العرجة بسرعة دون انتظار.

Comment:


The emergency menu for the Arabic version was not present. With the prototype is now present and shows the live counter and the slideshow just like the English version.

8. Before:

الأطباء	أوقات الزيارة	جدول العيادات
بحث	قم بإختيار اسم الطبيب	قم بإختيار اسم العيادة

الطوارئ الآن

After



يوسف هيثم الصالح
09582090

تسجيل خروج

الملف الطبي

شفاء
مستشفى جامعة الملك عبدالعزيز
بوابة المريض

EN

الرئيسية

الخدمات


جدول العيادات

الطوارئ

خريطة المستشفى

اتصل بنا

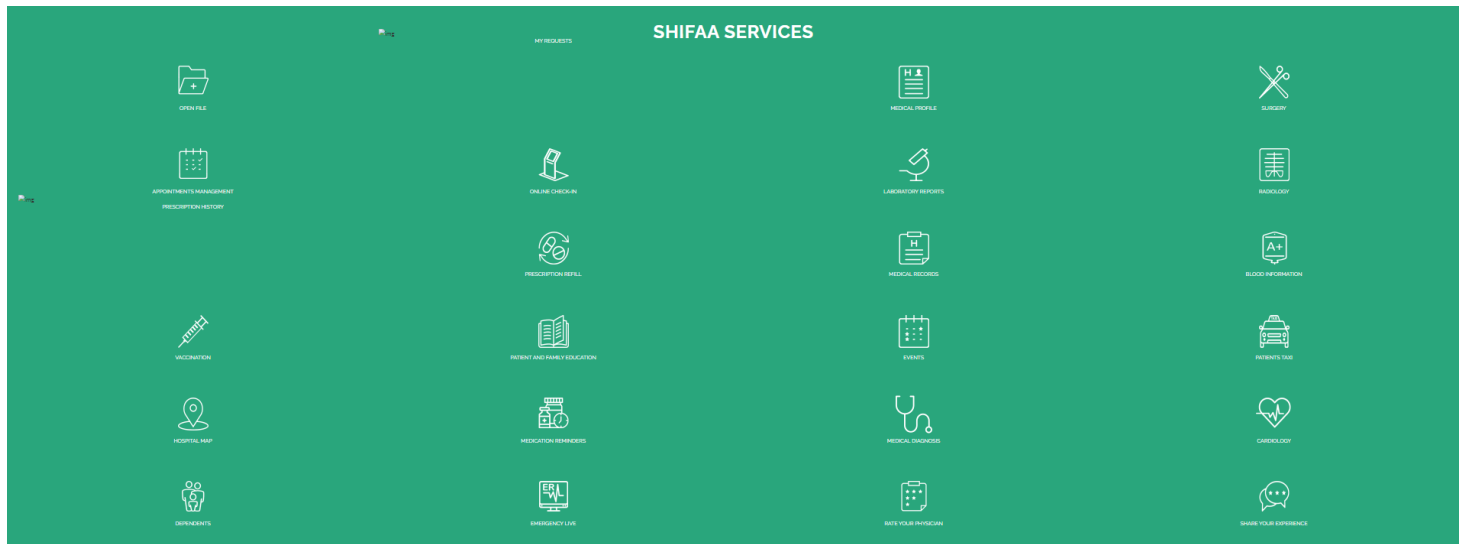
الأطباء	أوقات الزيارة	جدول العيادات
بحث	قم بإختيار اسم العيادة	



Comment:

The clinic's schedule has been slightly changed and now it has a page that can be reached from the global menu, instead of the clinic schedule being in the middle of the main page, as it was before. The list of clinics is changed as well, making it slightly bigger and more visible when selecting a clinic from the list. We believe that this change will make the clinic's schedule easier, faster, and less frustrating to reach, and would provide a better and a more satisfying experience for the user.

9. Before:



After:

The screenshot shows the Shifaa King Abdulaziz University Patients Portal. The header is green with the Shifaa logo and the text 'Shifaa King Abdulaziz University Patients Portal'. On the right, there is a user profile for 'Yousef Haitham Alsayegh' with ID '1938296' and a 'Sign Out' button. Below the header is a navigation bar with links: 'Main page', 'Services', 'Clinics Schedule', 'Emergency' (highlighted in red), 'Hospital's Map', and 'Contact us'. Below the navigation bar is a section with four icons: 'My Requests' (document icon), 'Appointments' (calendar icon), 'Lab Results' (DNA helix icon), and 'Prescriptions' (pill bottle icon). Below this is a table with the following data:

Title	Date	Status	
Request Room	10 April 2022	On hold	Description
Transportation	9 April 2022	Accepted	Description
Request Beds	8 April 2022	Denied	Description
Request Pillows	5 April 2022	Accepted	Description
Transfer	1 April 2022	On hold	Description

Below the table is a blurred image of a hand wearing a blue glove.

Comment:

We made a huge change to the services tab since on the original website the services were only images that did not do anything so we tried to group up similar services together and give each one features that might be useful for the user such as the ability to review their request and their status.

Storyboard


1. Open a file.



Here if I want to open a file I can easily see the open file tap on the main menu it does not take much time to understand it.



Since I am an academic staff, I pressed on academic staff button.



شفا
مستشفى جامعة الملك عبدالعزيز
بوابة المريض



EN
إتصل بنا
خريطة المستشفى
الطوارئ
جدول العيادات
الخدمات
الرئيسية



فتح ملف طبي جديد لأعضاء هيئة التدريس

أي حقل عليه علامة * مطلوب

رقم الهوية أو الإقامة:
رقم الهوية أو الإقامة هنا*

الاسم (عربي):
الإسم الأول*
الإسم الأوسط*
الإسم الأخير*

الاسم (إنجليزي):
الإسم الأول*
الإسم الأوسط*
الإسم الأخير*

العنوان:
الشارع*
الحي*
المدينة*

معلومات التواصل:
البريد الإلكتروني
هاتف المنزل
الجوال*

جنس:
المهنة الاجتماعية
الجنس*

تاريخ الميلاد:
اليوم*
الشهر*
السنة*

صورة الهوية:
رفع صورة الهوية*
Select file

صورة بطاقة العمل:
رفع صورة بطاقة العمل*
Select file

إفادة:
رفع الإقامة*
Select file

إرسال الطلب
رجوع

جميع الحقوق محفوظة لإدارة تقنية المعلومات بمستشفى جامعة الملك عبد العزيز @ 2017

After filling all these fields, which I found easy to understand, then I pressed send.



This message appears to me after sending my request, and now I just have to wait until I get a message containing the approval of the request.

2. Hospital's location.





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بوابة المريض

تسجيل الدخول

تسجيل جديد

فتح ملف

الرئيسية

الخدمات

جدول العيادات

الطوارئ

خريطة المستشفى

إتصل بنا





العنوان:
7441 المرتضى، جامعة الملك عبدالعزيز جدة
3646 22252




الهاتف:
966 012 640 8222
فاكس:
966 012 695 2538



البريد الإلكتروني:
shifaa@kau.edu.sa

رجوع

جميع الحقوق محفوظة لإدارة تقنية المعلومات بمستشفى جامعة الملك عبد العزيز @ 2017



King Abdulaziz University Hospital

مستشفى جامعة الملك عبدالعزيز

3.4 ★★★★★ 647 reviews

University hospital

Directions

Save

Nearby

Send to your phone

Share

You visited 4 years ago

7441 المرتضى - جامعة الملك عبدالعزيز جدة 3646 22252

Located in: King Abdulaziz University

Open 24 hours

hospital.kau.edu.sa

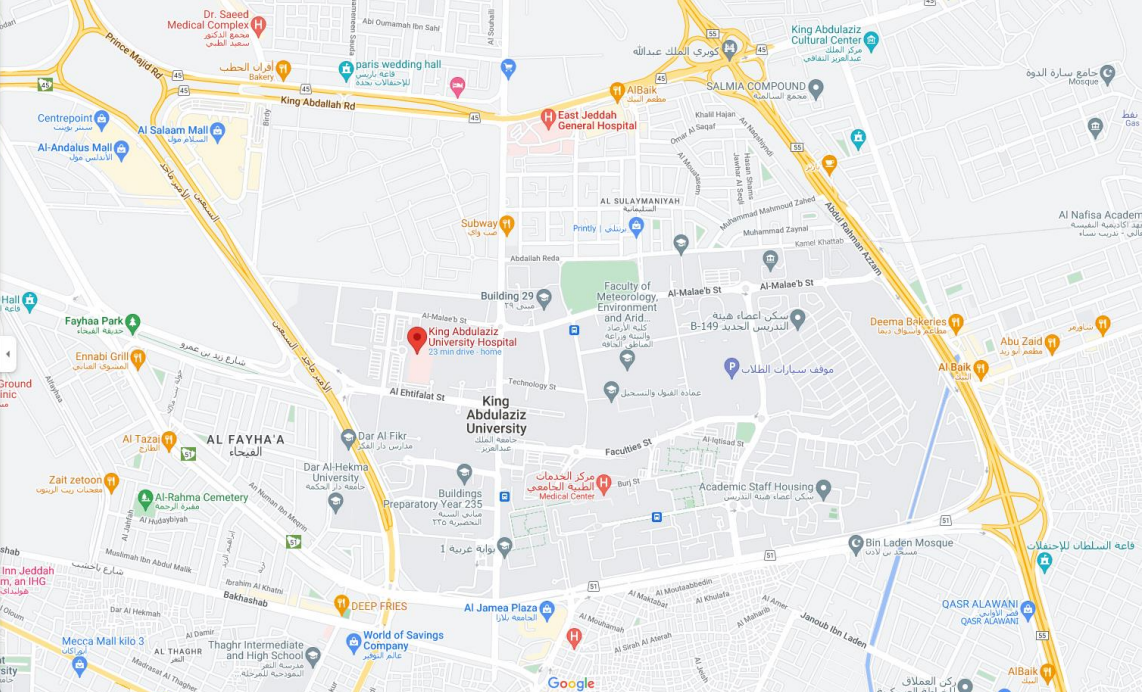
012 640 8222

F6WM+PV King Abdul Aziz University, Jeddah

Claim this business

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Suggest an edit



if I want to go to the hospital but I do not know where it is, I can now after the changes press contact us then press on the address, after that it will open for me the maps so I can go to the hospital.

Conclusion

In conclusion, we learned so much about how interfaces affect the website and how bad interfaces can lead to a big problem which is the users will avoid using the website or the application, we have learned in HCI that usability is very important and user needs is the core of HCI, so it is very important to take in account users' opinions and that is what we did in our project, for example, our report is about shifaa a hospital website so it's important to have a usable and easy-to-learn interface that does not have any mistakes, we will use the data that we got here to fix the website in the future.

Links:

Video: <https://drive.google.com/file/d/1BkG5nclC6P7wqCVz9kIKEbwp-L1dRVXF/view?usp=sharing>

Figma: <https://www.figma.com/proto/cOBwyWuwWYBSWXauD4LPBL/Shifaa?page-id=0%3A1&node-id=7%3A2&viewport=241%2C48%2C0.02&scaling=contain&starting-point-node-id=7%3A2>