



MEDICAL TECHNOLOGY



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Abstract

Medical Technology online

This site provides the service of detection via the Internet through our site for this patient for a fee in order to save effort and time on the user

- The patient is examined by describing the patient's condition via chat or online video, and that is after the patient has filled in the required steps from him...

This is to preserve the full rights of the patient and the site.

1-The patient creates a personal account to enable him to enter the site.

2-The user records his personal information, name, email and date of birth on the site to create an account for him after it is confirmed that he has filled out the data and activated the activation code to -enable him to register his account on the site.

3-The patient or user fills and updates the private data on his personal page such as name, age, address, photo, phone number, weight, blood type, condition, etc.

4- The patient enters the reservation page to search for the specialty that he wants and needs for his medical condition

or as he wants from medical inquiries or advice from specialized doctors and he selects the appropriate doctor for his condition and makes a choice and book the date of the appropriate examination at the time and date and pay the price of the examination according to the way of payment or payment that he wishes With her, Reservations are sent to Dr. Ali, page of the section devoted to reservations for each doctor, to begin follow-up to patients.

5- The doctors are chosen and added in each specialty that was contracted through the administration board

6- The doctor updates his data, establishes his name, specialization, degree, phone number, address of his clinic, the price of his assigned examination, information about his studies, and sets available dates for the examination.

7- The doctor begins following up the cases and reservations, starting a conversation with each of them at the date of his examination, and the patient describes his condition to the doctor.

8- After the conversation has taken place and the patient has finished describing his condition clearly to the doctor, the doctor will write a description of the case and the appropriate medication for his medical condition in a report on the patient's name recorded in the patient's medical

record with the detection data and data of both parties so that the patient can follow up his condition and treat with caution and security in taking any drugs and also It helps to know his condition for the doctors he deals with in other specialties, so that they look at his personal file in the medical record so that he can properly diagnose his condition and give him the appropriate medicine for him.

9- If the patient's condition requires you to go to the doctor's office, he will be completed Reservation via the site, appointment, day and time, and pay for the check-in date The clinic upon his arrival without any other procedures to directly detect.

10- The site provides the patient with a number of pharmacies contracted with. Once the patient or user is registered on our site, he will be given the name of a pharmacist who deals with it and give him a bar code to make a discount for him.

11- When the patient or client deals with the pharmacy, the pharmacist takes (random id & coupon) until it is confirmed, activated, and a customer discount Our site includes sections from other specializations for cases such as cosmetology and related cosmetic consultations and what the user demands There is another section of doctors to

treat obesity cases with excessive medical advice, follow-up with them, and physical fitness.

12- The patient or user gives his opinion, comment, evaluation, and notes to the doctor who was dealt with and these notes appear to the doctors in their list of notes until all observations and comments to work are best followed up befitting the patient and the availability of all what he needs in all medical and moral directions as well.

13- In light of the circumstances we are experiencing and the world is going through from the spread of its epidemics such as the Corona virus that invaded the world and caused many infections and a significant negative impact psychologically and healthy in our lives and diseases and accidents in our present time, we have done a positive side that helps patients and users of our site in Their daily lives and giving them health instructions to strengthen their immunity to strengthen their bodies to help them and fight them for depression to raise their morale because this is a key factor in fighting these epidemics.

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Table of Content

Abstract	3
Acknowledgement	7
Table of content	8

PART I Overview

Chapter 1: Introduction	14-21
1.1 Stages	14
1.2 Overview about proposed system	16
1.3 Objectives and Goals	17
1.4 Problems	19
1.5 The ERD Diagram	20
1.6 Languages	21
1.7 Tools	21
Chapter 2: System development life cycle	22-39
2.1 Overview	23
2.2 Advantages and disadvantages of SDLC	26
2.3 The phase of planning	27
2.4 The phase of analysis	29
2.5 The phase of design	31
2.6 The phase of develop	34

2.7 The phase of testing & maintaining	35
2.8 The phase of Implementation and Evaluation	38
2.9 Conclusion of SDLC	39
Chapter 3: planning phase	43-51
3.1 problem definition	44
3.2 system requirement	44
3.3 purpose solution	44
3.4 data collection	45
3.4.1 data collection techniques	46
3.5 research and site visits	49
3.6 the future in our site	51
Chapter 4: analysis phase	52-73
4.1 Overview	53
1. Use case	54
1.1 Sign-in use case	55
1.2 Sign-up use case	56
1.3 Booking use case	57
1.4 Chat use case	60
2. Data flow diagram (DFD)	62

Level 0 of DFD	63
Level 1 DFD for process 1 (sign-In)	64
Level 1 DFD for process 1.1(enrolling home page)	65
Level 1 DFD for process 2 (register)	65
Level 2 DFD for process 2.1 (editing patient profile)	66
Level 2 DFD for process 2.2 (appointment)	66
Level 2 DFD for process 2.3 (booking)	67
Level 2 DFD for process 2.4.1 (chatting)	67
Level 3 DFD for process 3.1 (handle doctor profile)	68
Level 3 DFD for process 3.2 (check booking time)	68
Level 3 DFD for process 3.2.1 (check booking time availability)	68
Level 3 DFD for process 3.2.2 (Start work)	69
Level 3 DFD for process 3.3 (Report)	69
Level 4 DFD for process 4.1 (Confirm pharmacy)	70
Level 4 DFD for process 4.2 (Coupon)	70
Level 5 DFD for process 5.1 (Admin panel page)	71
3.Context free diagram (CFD)	72
4.Entity-relationship diagram (ERD)	73
Chapter 5: design phase	74-103
5.1 Overview	75
5.2 Tools used in design	76
5.3 Home Page and its advantages	82

5.4 Admin privileges and his own pages	85
5.5 Doctor privileges and his own pages	88
5.6 Patient privileges and his own pages	92
5.7 Medical information and advice page such as the Covid-19 epidemic	100
5.8 The basics of the site	103
Chapter 6 : development phase	104-127
1) Function signup	105
2) Function sign-in	107
3) Function sign in-role	109
4) Function profile-patient	110
5) Function profile-doctor	111
6) Function booking	112
7) Function payment method	114
8) Function Confirm booking	115
9) Function chat	115
10) Function write report	117
11) Function report	118
12) Function medical record	120
13) Function sign-in for pharmacist	121
14) Method confirm promo code	121
15) Function rating	123
16) Function testimonial	123
17) Function dynamic page	124
18) Admin add user	125
19) Function search doctor	126
20) Function delete doctor	126
21) Function update doctor	127

PART I

Chapter 1

Introduction

First Stage:-

- 1-considered as a home page of the website medical technology.
- 2-it discuss that it help all the patients to treatment easily from all the world.
- 3-Any patient could communicate with the doctor from this website from chatting or video chat or chat pot to require a general questions or take any advice.
- 4-if the doctor couldn't aging the status of the patient, the patient could booked from the website.
“The patient could book easily from the website and pay a deposited from visa card or master card”

Second Stage:-

This website will provide many pharmacists to help the patient get his treatment easily.

Third Stage:-

- 1-this stage is considered as health awareness.
- 2-there was an advices about this awareness.
- 3-Although there was a coach a patient could communicate with him to any question or advice, and could booked a course treatment.

Fourth Stage:-

- 1-This stage was dedicated to the people awareness.
- 2-It will include stories and feedback from many experiments from many other people before
- 4-there is although a short summary about covid-19 virus, the virus which scattered the whole world, and there is although many advices and instructions to protect from this virus

1.2 Overview about proposed system:-

This website or this system his first propose Our site provides immediate access to emergency and difficult cases such as many fainting cases and other cases that are difficult for circumstances such as the distances and time between them and the hospital without any procedures dealt with by emergency doctors assigned to these cases and the case is dealt with quickly from an ambulance and his benefit This provides ambulance assistance to the patient in a safe and medical manner, or until he reaches the hospital if necessary ...

The first goal of this site is to benefit a lot of people and encourage each of us to take care of his health and not neglect because of the difficult issue due to the lack of availability or ease of circumstances with what we are experiencing difficulties in our daily life because a healthy life is formed in a healthy health in a healthy body healthy except this site provides a lot From time and distance we can reassure us of our health in a medical and safe way by following up with the best doctors in various specialties through your location and as if you went to a hospital to uncover, it benefits various ages father mother daughter son brother everyone.

1.3 Objectives and goals:-

1-The first goal of this site is to benefit a lot of people and encourage each of us to take care of his health.

2-This site provides a lot from time and distance we can reassure us of our health in a medical and safe way by following up with the best doctors in various specialties through your location and as if you went to a hospital to uncover.

3-it benefits various ages father, mother, daughter, son, brother, everyone.

4-The patient could book easily from the website and pay a deposited from visa card and master card.

5-this website communicates with various pharmacies to help the patient get his drugs easily.

6-It will recommended many devices to the parents to be aware how to take care of his child and how to treat with him in the specific situations, to treat the child right.

7-It will help the parents to know healthful information, to treat the child at all age stages ,when the child have a mobile and don't effect by it, what's the kind of food will be useful to him not harm his health and etc..

The first goal of this site is to benefit a lot of people and to encourage each of us to care about his health and not neglect because of the difficult issue due to the lack of availability or ease of conditions with what we are experiencing difficulties in our daily life and crises so the online has become an important aspect of our life but rather a basic aspect that we need in all circumstances And its use permanently because a healthy life is formed in a healthy health in a healthy body well, this site saves a lot of time And the distances are to assure us of our health in a medical and safe way by following up with the best doctors in various disciplines through your location and as if you went to a hospital to uncover, as it benefits the various ages the father the mother the son the sister the brother everyone must we all think positively and sound, And security to help each other and the availability of means that help mankind and that help a person in his daily life, the most important of which is his health and his life so that we all live in peace and are assured of our health and the health of our children.

1.4 Problems:-

- 1-This site helps the disabled people to communicate with specialist's doctors easily.
- 2-helps the people who get problems and difficult ways to get them drugs by provides various pharmacies to help them get the drugs easily.
- 3-Helps the people who lived in along distances from any hospitals and have a problem by travelling to any doctor by booked online with specialists doctors.

1.5 The ERD Diagram:-

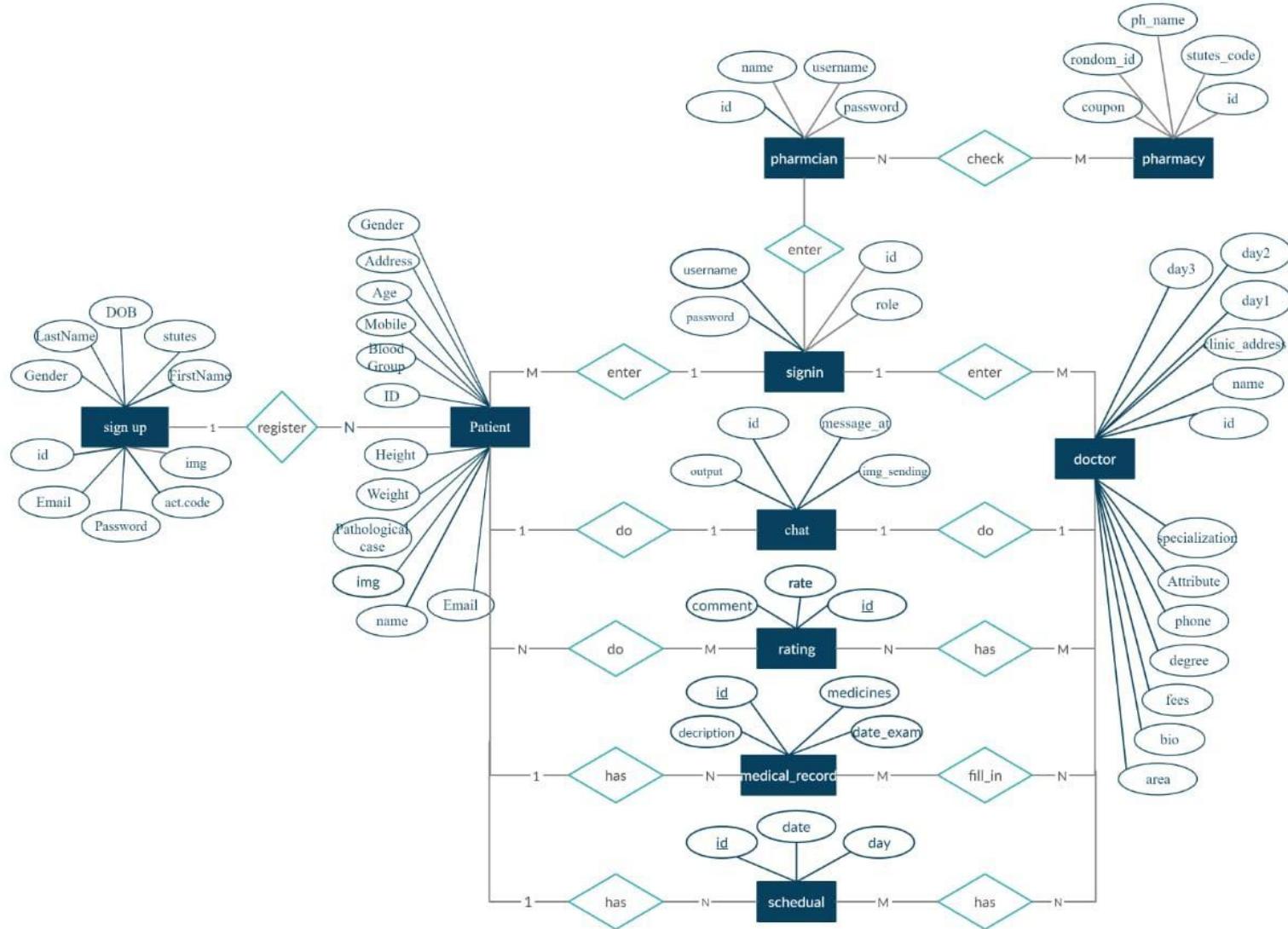


Figure 1.1

1.6 Languages:-

1-Front End: (HTML 5, CSS3, JQUERY, BOOTSTRAP, JAVASCRIPT, AJAX).

2-Back End: (PHP, MYSQL)

1.7 Tools:-

1-Design: Photoshop-Bootstrap-Font Awesome.

2-Front End: bracket editor.

3-Back End: Workbench, php myadmin.

Chapter 2

System Development Life Cycle

2.1 Overview:-

The systems development life cycle (SDLC) is a conceptual model used in project management that describes the stages involved in an information system development project, from an initial feasibility study through maintenance of the completed application. SDLC can apply to technical and non-technical systems. In most use cases, a system is an IT technology such as hardware and software. Project and program managers typically take part in SDLC, along with system and software engineers, development teams and end-users.

Every hardware or software system will go through a development process which can be thought as an iterative process with multiple steps. SDLC is used to give a rigid structure and framework to define the phases and steps involved in the development of a system.

Throughout this chapter we have referred to the systematic approach analysts take to the analysis and design of information systems much of this is embodied in what is called the systems Development life cycle (SDLC). The SDLC is a phased approach to analysis and design that holds that systems are best developed through the use of a specific cycle of analyst and user activities.

Analysts disagree on exactly how many phases there are in the SDLC, but they generally laud its organized approach. Here we have divided the cycle into seven phases,

As shown in Figure 2.1. Although each phase is presented discretely, it is never accomplished as a separate step. Instead, several activities can occur simultaneously, and activities may be repeated.

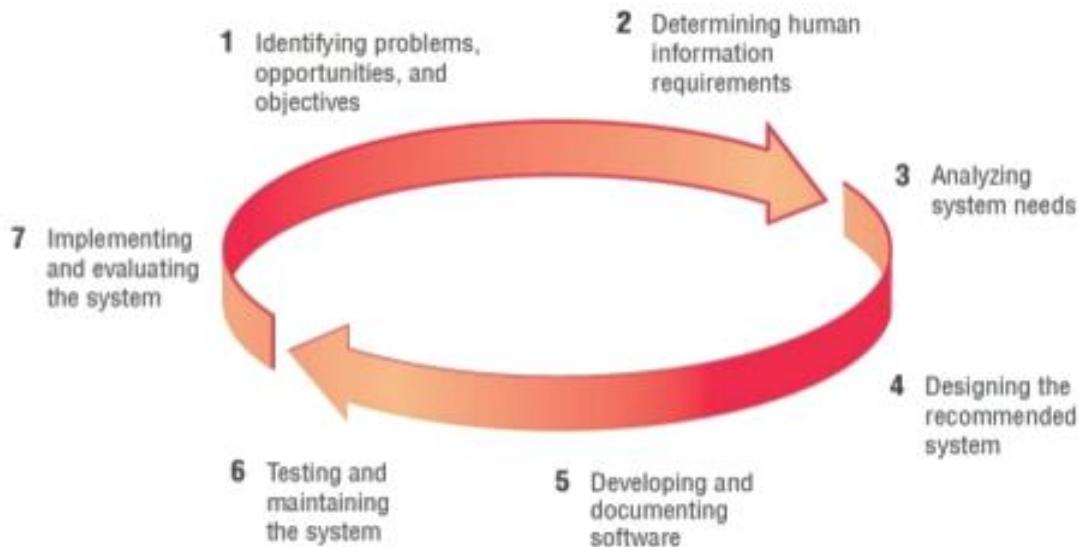


Figure 2.1, System Development life cycle (SDLC)

In recent years, the study of human–computer interaction (HCI) has become increasingly important for systems analysts. Although the definition is still evolving, researchers characterize HCI as the “aspect of a computer that enables communications and interactions between humans and the computer. It is the layer of the computer that is between humans and the computer” (Zhang, Carey, Te’eni, & Tremaine, 2005, p. 518). Analysts using an HCI approach are emphasizing people rather than the work to be done or the IT that is involved. Their approach to a problem

is multifaceted, looking at the “human ergonomic, cognitive, affective, and behavioral factors involved in user tasks, problem solving processes and interaction context” (Zhang, Carey, Te’eni, & Tremaine, 2005, p. 518). Human computer interaction moves away from focusing first on organizational and system needs and instead concentrates on human needs. Analysts adopting HCI principles examine a variety of user needs in the context of humans interacting with information technology to complete tasks and solve problems. These include taking into account physical or ergonomic factors; usability factors that are often labeled cognitive matters; the pleasing, aesthetic, and enjoyable aspects of using the system; and behavioral aspects that center on the usefulness of the system.

Your career can benefit from a strong grounding in HCI. The demand for analysts who are capable of incorporating HCI into the systems development process keeps rising, as companies increasingly realize that the quality of systems and the quality of work life can both be improved by taking a human-centered approach at the outset of a project.

The application of human–computer interaction principles tries to uncover and address the frustrations that

users voice over their use of information technology. These concerns include a suspicion that systems analysts misunderstand the work being done, the tasks involved, and how they can best be supported; a feeling of helplessness or lack of control when working with the system; intentional breaches of privacy; trouble navigating through system screens and menus; and a general mismatch between the system designed and the way users themselves think of their work processes.

Misjudgments and errors in design that cause users to neglect new systems or that cause systems to fall into disuse soon after their implementation can be eradicated or minimized when systems analysts adopt an HCI approach.

Researchers in HCI see advantages to the inclusion of HCI in every phase of the SDLC. This is a worthwhile approach, and we will try to mirror this by bringing human concerns explicitly into each phase of the SDLC. As a person who is learning systems analysis, you can also bring a fresh eye to the SDLC to identify opportunities for designers to address HCI concerns and ways for users to become more central to each phase of the SDLC.

2.2 Advantages and disadvantages of SDLC:

Benefits of abiding by a clearly defined SDLC model include:

- Having a clear view of an entire project, workers involved, estimated costs and timelines.
- Gives project managers a projected base cost of the project.
- Goals and standards are clearly defined.
- Developers can move back a step if something does not go as expected.

Disadvantages, however, can include:

- Due to assumptions made at the beginning of a project, if an unexpected circumstance complicates the development of a system, then it may stockpile into more complications down the road. As an example, if newly installed hardware does not work correctly, then it may increase the time a system is in development, increasing the cost.
- Some methods are not flexible.
- It can be complicated to estimate the overall cost at the beginning of a project.
- Testing at the end of development may slow down some development teams.

2.3 The phase of planning:-

In the planning phase, project goals are determined and a high-level plan for the intended project is established. Planning is the most fundamental and critical organizational phase. The three primary activities involved in the planning phase are as follows:

- 1- Identification of the system for development
- 2- Feasibility assessment
- 3- Creation of project plan

In this first phase of the systems development life cycle, the analyst is concerned with correctly identifying problems, opportunities, and objectives. This stage is critical to the success of the rest of the project, because no one wants to waste subsequent time addressing the wrong problem.

The first phase requires that the analyst look honestly at what is occurring in a business. Then, together with other organizational members, the analyst pinpoints problems. Often others will bring up these problems, and they are the reason the analyst was initially called in. Opportunities are situations that the analyst believes can be improved through the use of computerized information systems. Seizing opportunities may allow the business to gain a competitive edge or set an industry Standard.

Identifying objectives is also an important component of the first phase. The analyst must first discover what the business is

trying to do. Then the analyst will be able to see whether some aspect of information systems applications can help the business reach its objectives by addressing specific problems or Opportunities.

The people involved in the first phase are the users, analysts, and systems managers coordinating the project. Activities in this phase consist of interviewing user management, summarizing the knowledge obtained, estimating the scope of the project, and documenting the results. The output of this phase is a feasibility report containing a problem definition and summarizing the objectives. Management must then make a decision on whether to proceed with the proposed project. If the user group does not have sufficient funds in its budget or wishes to tackle unrelated problems, or if the problems do not require a computer system, a different solution may be recommended, and the systems project does not proceed any further.

Summary:

1. Define the project scope & milestones.
2. Identify the Work Breakdown Structure.
3. Set and agree the target delivery dates.
4. Monitor and control the allocation of resource.
5. Report on the progress of the project, to the sponsor.

2.4 The phase of analysis:-

In the analysis phase, end user business requirements are analyzed and project goals converted into the defined system functions that the organization intends to develop. The three primary activities involved in the analysis phase are as follows:

- 1- Gathering business requirement.
- 2- Creating process diagrams.
- 3- Performing a detailed analysis.

Business requirement gathering is the most crucial part at this level of SDLC. Business requirements are a brief set of business functionalities that the system needs to meet in order to be successful. A sample business requirement might look like “The system must track all the employees by their respective department, region, and the designation”. This requirement is showing no such detail as to how the system is going to implement this requirement, but rather what the system must do with respect to the business.

The next phase that the systems analyst undertakes involves analyzing system needs. Again, special tools and techniques help the analyst make requirement determinations. Tools such as data flow diagrams (DFD) to chart the input, processes, and output of the business's functions, or activity diagrams or sequence diagrams to show the sequence of events, illustrate systems in a structured, graphical form. From data flow,

sequence, or other diagrams, a data dictionary is developed that lists all the data items used in the system, as well as their specifications.

During this phase the systems analyst also analyzes the structured decisions made. Structured decisions are those for which the conditions, condition alternatives, actions, and action rules can be determined. There are three major methods for analysis of structured decisions: structured English, decision tables, and decision trees.

At this point in the SDLC, the systems analyst prepares a systems proposal that summarizes what has been found out about the users, usability, and usefulness of current systems; provides cost-benefit analyses of alternatives; and makes recommendations on what (if anything) should be done. If one of the recommendations is acceptable to management, the analyst proceeds along that course.

Each systems problem is unique, and there is never just one correct solution. The manner in which a recommendation or solution is formulated depends on the individual qualities and professional training of each analyst and the analyst's interaction with users in the context of their work environment.

2.5 The phase of design:-

In the design phase, we describe the desired features and operations of the system. This phase includes business rules, pseudo-code, screen layouts, and other necessary documentation. The two primary activities involved in the design phase are as follows:

- 1- Designing of IT infrastructure.
- 2- Designing of system model.

To avoid any crash, malfunction, or lack of performance, the IT infrastructure should have solid foundations. In this phase, the specialist recommends the kinds of clients and servers needed on a cost and time basis, and technical feasibility of the system. Also, in this phase, the organization creates interfaces for user interaction. Other than that, data models and entity relationship diagrams (ERDs) are also created in the same phase.

In the design phase of the SDLC, the systems analyst uses the information collected earlier to accomplish the logical design of the information system. The analyst designs procedures for users to help them accurately enter data so that data going into the information system are correct. In addition, the analyst provides for users to complete effective

input to the information system by using techniques of good form and Web page or screen design.

Part of the logical design of the information system is devising the HCI. The interface connects the user with the system and is thus extremely important. The user interface is designed with the help of users to make sure that the system is audible, legible, and safe, as well as attractive and enjoyable to use. Examples of physical user interfaces include a keyboard (to type in questions and answers), on screen menus (to elicit user commands), and a variety of graphical user interfaces (GUIs) that use a mouse or touch screen.

The design phase also includes designing databases that will store much of the data needed by decision makers in the organization. Users benefit from a well-organized database that is logical to them and corresponds to the way they view their work. In this phase the analyst also works with users to design output (either on screen or printed) that meets their information needs.

Finally, the analyst must design controls and backup procedures to protect the system and the data, and to produce program specification packets for programmers. Each packet should contain input and output layouts, file

specifications, and processing details; it may also include decision trees or tables, UML or data flow diagrams, and the names and functions of any prewritten code that is either written in-house or using code or other class libraries.

2.6 The phase of Development:-

In the development phase, all the documents from the previous phase are transformed into the actual system. The two primary activities involved in the development phase are as follows:

- 1- Development of IT infrastructure.
- 2- Development of database and code.

In the design phase, only the blueprint of the IT infrastructure is provided, whereas in this phase the organization actually purchases and installs the respective software and hardware in order to support the IT infrastructure. Following this, the creation of the database and actual code can begin to complete the system on the basis of given specifications.

In the fifth phase of the SDLC, the analyst works with programmers to develop any original software that is needed. During this phase the analyst works with users to develop effective documentation for software, including

procedure manuals, online help, and Websites featuring Frequently Asked Questions (FAQs), on Read Me files shipped with new software. Because users are involved from the beginning, phase documentation should address the questions they have raised and solved jointly with the analyst. Documentation tells users how to use software and what to do if software problems occur.

Programmers have a key role in this phase because they design, code, and remove syntactical errors from computer programs. To ensure quality, a programmer may conduct either a design or a code walkthrough, explaining complex portions of the program to a team of other programmers.

2.7 The phase of testing and maintaining:-

Before the information system can be used, it must be tested. It is much less costly to catch problems before the system is signed over to users. Some of the testing is completed by programmers alone, some of it by systems analysts in conjunction with programmers. A series of tests to pinpoint problems is run first with sample data and eventually with actual data from the current system.

Often test plans are created early in the SDLC and are refined as the project progresses.

Maintenance of the system and its documentation begins in this phase and is carried out routinely throughout the life of the information system. Much of the programmer's routine work consists of maintenance, and businesses spend a great deal of money on maintenance. Some maintenance, such as program updates, can be done automatically via a vendor site on the Web.

Many of the systematic procedures the analyst employs throughout the SDLC can help ensure that maintenance is kept to a minimum.

In the testing phase, all the pieces of code are integrated and deployed in the testing environment. Testers then follow Software Testing Life Cycle activities to check the system for errors, bugs, and defects to verify the system's functionalities work as expected or not, often. The two primary activities involved in the testing phase are as follows:

- 1- Writing test cases.
- 2- Execution of test cases.

Testing is a critical part of software development life cycle. To provide quality software, an organization must perform testing in a systematic way. Once test cases are written, the tester executes them and compares the

expected result with an actual result in order to verify the system and ensure it operates correctly. Writing test cases and executing them manually is an intensive task for any organization, which can result in the success of any business if executed properly.

In the maintenance phase, any necessary enhancements, corrections, and changes will be made to make sure the system continues to work, and stay updated to meet the business goals. It is necessary to maintain and upgrade the system from time to time so it can adapt to future needs. The three primary activities involved in the maintenance phase are as follows:

- 1- Support the system users.
- 2- System maintenance.
- 3- System changes and adjustment.

Summary:

The testing phase of the SDLC is arguably one of the most important. It is impossible to deliver quality software

without testing. There is a wide variety of testing necessary to measure quality:

- 1-Code quality.
- 2-Unit testing (functional tests).
- 3-Integration testing.
- 4-Performance testing.
- 5-Security testing.

The best way to ensure that tests are run regularly, and never skipped for expediency, is to automate them. Tests can be automated using Continuous Integration tools, like Code ship, for example. The output of the testing phase is functional software, ready for deployment to a production environment.

2.8 The phase of Implementation and evaluation:-

In this last phase of systems development, the analyst helps implement the information system. This phase involves

training users to handle the system. Vendors do some training, but oversight of training is the responsibility of the systems analyst. In addition, the analyst needs to plan for a smooth conversion from the old system to the new one. This process includes converting files from old formats to new ones, or building a database, installing equipment, and bringing the new system into production.

Evaluation is included as part of this final phase of the SDLC mostly for the sake of discussion. Actually, evaluation takes place during every phase. A key criterion that must be satisfied is whether the intended users are indeed using the system.

It should be noted that systems work is often cyclical. When an analyst finishes one phase of systems development and proceeds to the next, the discovery of a problem may force the analyst to return to the previous phase and modify the work done there.

2.9 Conclusion of SDLC:-

- The SDLC is a systematic process for building software that ensures the quality and correctness of the software built

- The full form SDLC is Software Development Lifecycle.
- SDLC process provides a framework for a standard set of activities and deliverables
- Seven different SDLC stages are 1) Requirement collection and analysis 2) Feasibility study: 3) Design 4) Coding 5) Testing: 6) Installation/Deployment and 7) Maintenance
- The senior team members conduct the requirement analysis phase
- Feasibility Study stage includes everything which should be designed and developed during the project life cycle
- In the Design phase, the system and software design documents are prepared as per the requirement specification document
- In the coding phase, developers start build the entire system by writing code using the chosen programming language
- Testing is the next phase which is conducted to verify that the entire application works according to the customer requirement.
- Installation and deployment face begins when the software testing phase is over, and no bugs or errors left in the system

- Bug fixing, upgrade, and engagement actions covered in the maintenance face
- Waterfall, Incremental, Agile, V model, Spiral, Big Bang are some of the popular SDLC models
- SDLC consists of a detailed plan which explains how to plan, build, and maintain specific software

PART II

Chapter 3

Planning Phase

3.1 Problem definition:-

There are no sites that help people with disabilities communicate with specialist doctors easily.

There are not many people who help with difficult problems and difficult ways to get medications easily.

There are not many people who help who live distances from any hospital and have a problem by traveling to any doctor by booking online with specialist doctors.

There are no platforms to talk to doctors through doctors and to get consultations through the chat.

3.2 System requirement:-

Everyone must know his email & password and keep it secret.

Information about every Doctors and pharmacies.

Information about medical consulting and Health tips.

3.3 Purpose solution:-

We will make web page contain:

1-The home page of each user and contain basic information about him.

2-Profile Page for Each Doctor and Patient.

3-Doctors page that can book an appointment.

4-Pharmacies page from which to order medicine with offers.

3.4 Data collection:-

Data collection is a very demanding job which need thorough planning, hard work, patience, perseverance and more to be able to complete the task successfully. Data collection starts with determining what kind of data required followed by the selection of a sample from a certain population.

After that, you need to use a certain instrument to collect the data from the selected sample.

Types of data:

Data can be divided into two types, namely quantitative and qualitative. Quantitative data is numerical in nature and can be mathematically computed. Quantitative data measure uses different scales, which can be classified as nominal scale, ordinal scale, interval scale and ratio scale.

- Nominal scale is used to categorize items into different group, for example male and female, different examination grades, different races in a country, different types of companies, different shoe sizes and so on. The statistics that is used to analyze this type of data is mode.
- The second measure for quantitative data is the ordinal scale which other than providing information as the nominal scale does also permit ranking of the data. For

example, shoe sizes can be ranked from big to small.

A typical ordinal in ranking a set of data is poor, satisfactory, good, very god, excellent.

- On the other hand, an interval scale not only rank order of a set of data, it also measure the order in units of equal intervals. However, the starting point for the measurement is arbitrary rather than absolute.
- A ratio scale is an interval scale in which distances are stated with respect to a rational zero rather than with respect to, for example, the mean" (Nunnally, 1967, p.14). A rational zero is a location on an interval scale deliberately chosen for reasons other than the current data.

Sources of data:

Generally we can collect data from two sources, primary sources and secondary sources. Data collected from primary sources are known as primary data and data collected from secondary sources are called secondary data.

Our source of data that we collect to project is all primary source where we collect data from doctors, students, and other way to collect the data.

3.4.1 Data collection techniques:-

a) Using available information:-

- Usually there is a large amount of data that has already been collected by others, although it may not necessarily have been analyzed or published. Locating these sources and retrieving the information is a good starting point in any data collection effort.
- We used this technique to get data from previous projects and the regulation of our college.

b) Observation:-

- Observation is a process of recording the behavior patterns of people, objects, and occurrences without questioning or communicating with them. Observation can take the place in a laboratory setting or in a natural setting. Generally there are two ways to conduct observation, namely non-participative observation and participative observation.
- We used this technique to get data too from observe what problems that face us in the previous four year that is the period of studying I the college

c) Interviewing:-

- An INTERVIEW is a data-collection technique that involves oral questioning of respondents, either individually or as a group.
- Answers to the questions posed during an interview can be recorded by writing them down (either during the interview itself or immediately after the interview) or by tape-recording the responses, or by a combination of both.

- Interviews can be conducted with varying degrees of flexibility.
- We used this technique to get data too from ask supervised doctor and teach assistance about any data we don't know.

d) Questionnaires:-

- A WRITTEN QUESTIONNAIRE (also referred to as self-administered questionnaire) is a data collection tool in which written questions are presented that are to be answered by the respondents in written form.
- A written questionnaire can be administered in different ways, such as by:
 - Sending questionnaires by mail with clear instructions on how to answer the questions and asking for mailed responses.
 - Hand-delivering questionnaires to respondents and collecting them later.

e) Focus group discussions:-

Is a good way to gather together people from similar backgrounds or experiences to discuss a specific topic of interest?

3.5 Research and Site visits:-

Vezeeta:-

-It is the leading online healthcare platform for physicians' bookings and clinic management program in the MENA region. We drive the electronic and automatic reservation of doctors, clinics and hospitals to make quality healthcare accessible in the Arab region.

-With the help of more than 200,000 proven and reviewed assessments, the patient can search, compare, and book with the best doctors on the spot. Doctors can also provide an easy and unobstructed healthcare experience thanks to the Clinical Management Program from Vezeeta.

-Vezeeta provides a scheduling system on a paid subscription basis for medical personnel. The scheduling system can be accessed by subscribers both as an online service and via the deployed office calendar software, or integrated with their websites. The subscriber's schedules are available to the patients.

-The end user-searchable database includes specialties, range of services, office locations, photographs, personnel educational background and user-submitted reviews. Users can review doctors' schedules and make appointments for specific time slots.

Doctoruna:-

The site aims to help patients search for doctors of various disciplines, and compare them by reading their professional data and learning about their experiences, which facilitates the reservation process at the appropriate time for them. Our doctor also provides an opportunity for doctors to reach the largest segment of patients and help them to organize the appointment process so that they can provide better care for them.

Doctoori:-

The site strives to provide health information in high quality, reliable and easily accessible Arabic language.

The site believes that all people should take care of their health. To achieve this goal, reliable and easy-to-understand information must be provided in the Arabic language, which helps to improve the health of all Arabic-speaking people.

Dawaia:-

It is an electronic service for ordering medicines and cosmetics from the pharmacy quickly, you only need to take a picture of the drug or write the name of the drug, and upon request the surrounding pharmacies are alerted, the pharmacy with which the request is available will be approved, equipped and sent as quickly as possible.

Rosheta:-

Website aims to serve the field of medicine in Egypt by providing the drug online to customers through their nearest pharmacies for free without additional fees and also providing services to them through the ease of searching for the drug and knowing its information such as the active substance and its uses and the number of doses attached to the prescription of the drug.

3.6 The feature in our site:-

- I. The design is very simple that make dealing with the site is very easy.
- II. Providing medical consultations at home through the chat.
- III. Book an appointment for online advice.
- IV. Find doctors in all disciplines for their advice.
- V. Provide a detailed report for each patient.
- VI. There is a file for every doctor with all works and achievements.
- VII. A patient file containing all the health report.
- VIII. Cooperate with pharmacies to provide medicine online and provide special offers for clients.
- IX. Provide health information and guidance.
- X. Always continuous customer service.

Chapter 4

Analysis Phase

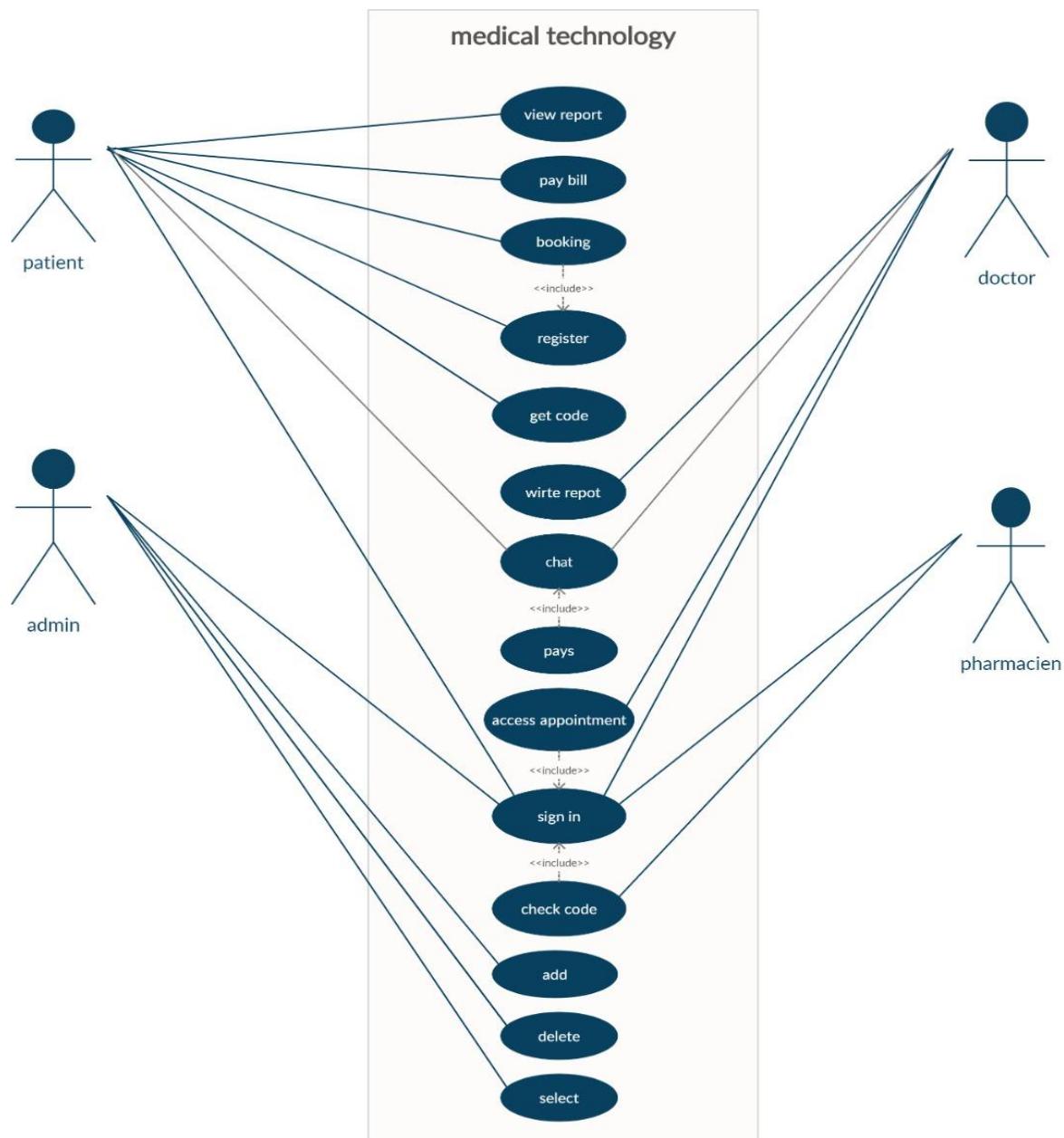
4.1 Overview:-

Medical technology online let us study a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way. The next phase that the systems analyst undertakes involves analyzing system needs. Again, special tools and techniques help the analyst make requirement determinations. Tools such as data flow diagrams (DFD) to chart the input, processes, and output of the business's functions, or activity diagrams or sequence diagrams to show the sequence of events, illustrate systems in a structured, graphical form. From data flow, sequence, or other diagrams, a data dictionary is developed that lists all the data items used in the system, as well as their specifications. The goal of system analysis is to determine where the problem is, in an attempt to fix the system. This step involves breaking down the system in different pieces to analyze the situation, analyzing project goals, breaking down what needs to be created and attempting to engage users so that definite requirements can be defined.

1. Use case:

We will show in this section the cases that will used in our project and the order of cases that we used. And the use case that we used is:-

1. Sign- in use case
2. Sign-up use case
3. Booking use case
4. Chat use case



1. Sign-in use case:

Is the first case that the user will face and user must login by his own e-mail & password to dealing with the site.

Use Case Name : sign-in to system	ID : MT-1	Priority : High
Actor: admin, patient, doctor, pharmacist.		
Description: <ul style="list-style-type: none">❖ Every one of actors can browse the website by his E-Mail and Password to open his home page.❖ Every one of actors has own profile page.		
Preconditions : <ol style="list-style-type: none">1. Every one of actors must write his E-Mail and Password correct.		
Normal registration : <ol style="list-style-type: none">1. Every one of actors writes his E-Mail and Password.2. The system satisfies the request if the input is correct.3. When user log-in to his own home page, he can do everything available on it.		
Alternative registration : <ol style="list-style-type: none">1. Every one of actors writes his E-Mail and Password.<ol style="list-style-type: none">1.1. The user must write the E-Mail and Password in the correct place.2. The system satisfies the request.<ol style="list-style-type: none">2.1. The system takes user E-Mail and Password.2.2. The system search in database about the input.2.3. If the input is found in database, the system satisfies the request of user then opens his account page.2.4. If the input isn't found in database, the system doesn't do anything and show error message for the user.3. When the input is correct the user open home page.<ol style="list-style-type: none">3.1. The user does everything available.<ol style="list-style-type: none">3.1.1. Administrator can control the website.3.1.2. Patient can book and contact with available doctors3.1.3. Doctor can check his booking schedule on his account, contact with patients.3.1.4. Pharmacist check and active the coupon of patient and give discount		

Post Conditions :

1. When E-Mail and Password is found in database, the system accept user log-in.

Exception :

1. When E-Mail or Password isn't found in database, the system send error message to user.

Summary Inputs

	Source	Output	Destination
✓ E-Mail Password ✓ the statue	and ✓ Teaching staff ✓ Student ✓ Administrator ✓ database	✓ Home page ✓ E-Mail and Password	✓ System to search in data store ✓ To the system

2. Sign-up use case:-

In this second case the user will sign-up and this is just available to administrator and patient, any admin can register each of doctors and patients.

Use Case Name : sign-up to system	ID : MT-2	Priority : High
Actor: Admin ,patient		
Description: <ul style="list-style-type: none"> ❖ Administrator can add, delete, and search in database for doctors by username and password. ❖ He will register doctors manually in the database. ❖ Administrator can add patient by user name and password 		

Preconditions :

1. All the information about doctor must be correct.
2. Administrator must add the basic information about doctors.
3. Administrator can add patient details for registration on website

Normal Course :

1. Admin can edit the information about doctor.
2. Admin can delete the basic information about doctors.
3. Admin inserts this information in website and system saving it in database.

Alternative Course :

1. Admin can edit the information about doctor
 - 1.1. The system takes the edited information and saving them in database.
2. Admin can delete the basic information about doctor.
 - 2.1. The system will delete the information about the doctor
3. Administrator will insert all basic information (Name, E-Mail, Password, Status, etc.).
 - 3.1. Admin inserts this information in account and system saving it in database.

Post Conditions :

1. After the system saving the information in database, the administrator will see successful message.
2. If the admin don't insert any of basic information about doctors the system doesn't move to other pages and show error message.

Summary

Inputs	Source	Output	Destination
✓ Doctor's information ✓ New admin's information ✓ Adding patient	✓ Administrator ✓ Administrator ✓ Administrator	✓ Successful message ✓ Successful message ✓ Successful message	✓ Administrator ✓ Administrator ✓ Administrator

3. Booking use case:

Is the third case that the user (patient) will search and book doctor available to patient only.

Use Case Name : booking time	ID : MT-3	Priority : high
Actor:		
✓ Patients		
Description:		
<ul style="list-style-type: none"> ❖ Patient firstly search the needed doctor and his specialization from the list in the booking page in the site ❖ Every patient can book the available time in the schedule, cancel or modify that appointment ❖ Only doctors can add, remove or modify on his schedule. ❖ When patient adds appointment, the system search in database about if there's an appointment with the same (day– time) or not available. ❖ If the system matched appointment with same day and time, then return with message “There's appointment with this day” and return to the confirm appointment. ❖ If the system didn't match appointment with this day and time, then Return to the booking page. 		
Precondition :		
<ol style="list-style-type: none"> 1. There's no two or more appointment have the same time. 2. All specialization have more than one doctor. 3. It's an easy way to book doctor from our website with safety. 		
Normal booking :		
<ol style="list-style-type: none"> 1. Patient firstly search the needed doctor and his specialization from the list in the booking page in the site 2. When patient wants to make appointment, he choose his suitable day and time. 3. When the system accept new appointment, all doctors will receive confirmed messages on his emails. 4. When patient wants to edit an appointment, he must make sure that the day not booked and none book it. 		

Alternative Course :

1. Patient firstly search the needed doctor and his specialization from the list in the booking page in the site
 - 1.1. From specialization list choose the doctor
 - 1.2. Patient should determine the specialization and doctor.
2. When patient wants to make appointment, he choose his suitable day and time.
 - 2.1. When patient select the doctor, then he select the day and time that is available.
 - 2.2. If system match the appointment (day and time), then display "The appointment, already booked", else create new appointment
3. When the system accept new appointment, all doctors will receive confirmed messages on his emails.
 - 3.1. When the appointment was booked the doctor will receive a confirmed message on his email.
4. When patient wants to edit an appointment, he must make sure that the day not booked and no one book it.
 - 4.1. If the patient want to edit on his appointment he can modify the booking time from his profile
 - 4.2. The system take this edit and saving in database for security.

Post Condition :

1. There's no two or more appointment have the same time.
2. There's no specialization without doctor.

Exception :

1. When patient make new appointment, system will display error massage if the day is not available

Summary

Inputs	Source	Output	Destination
✓ Information about appointment	✓ Patient ✓ doctor	✓ Make appointment	✓ Any patient in web site

4. Chat use case:

Is the fourth case that the user (patient) will communicate and chat with doctor that book with him.

Use Case Name : chat-box	ID : MT-4	Priority : high
Actor:		
✓ Patient ✓ doctor		
Description: <ul style="list-style-type: none">❖ the patient and the doctor communicate with each other in this chat box❖ after the patient confirm the booking of the appointment they will be take a same room number and start to chat in this room in the booked time❖ in this chat the patient can explain his case to the doctor by sending messages and for more clarification he can send an attached image to facilitate the diagnoses to the specialized doctor		
Precondition : <ol style="list-style-type: none">1. Patient can't chat with two or more doctors in the same time.2. The patient and the doctor must have the same room number3. The room has a counter time end after 30 minutes.4. After the doctor finish with this patient he can easily go to another chat with another patient book with him		
Normal chatting : <ol style="list-style-type: none">1. Patient firstly enter the chat room and the doctor also enters at the same time2. Once The room is created the counter start (30 min)3. When patient wants to send image , he choose his image from his device and send it4. The patient can end the chat any time he want when he finished5. The patient can vie his medical record any time from the chat box		

Post Condition :

1. There's no two or more doctor have the same time Chat with
- 2.
3. many patients

Exception :

1. If the patient case need more than 30 min chatting with doctor he can open another room to complete his explanation correctly

Summary Inputs	Source	Output	Destination
✓ Information about patient	✓ Patient ✓ doctor	✓ assign the case in medical record	✓ chat room in the web site

Figure 4.5 chat use case

2. Data flow diagram (DFD):-

Is a graphical representation of the "flow" of data through an information system, modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system, which can later be elaborated. DFDs can also be used for the visualization of data processing (structured design).

A DFD shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored. It does not show information about the timing of process or information about whether processes will operate in sequence or in parallel (which is shown on a flowchart).

And the Data flow diagram is separate to levels every level is show the process that do in project and its input and output and the process can separate to more than process this separate is a new level of DFD.

- **Level 0 of DFD:-**

In the level 0 we see all general process (use case) that the system processed to take general input and general output.

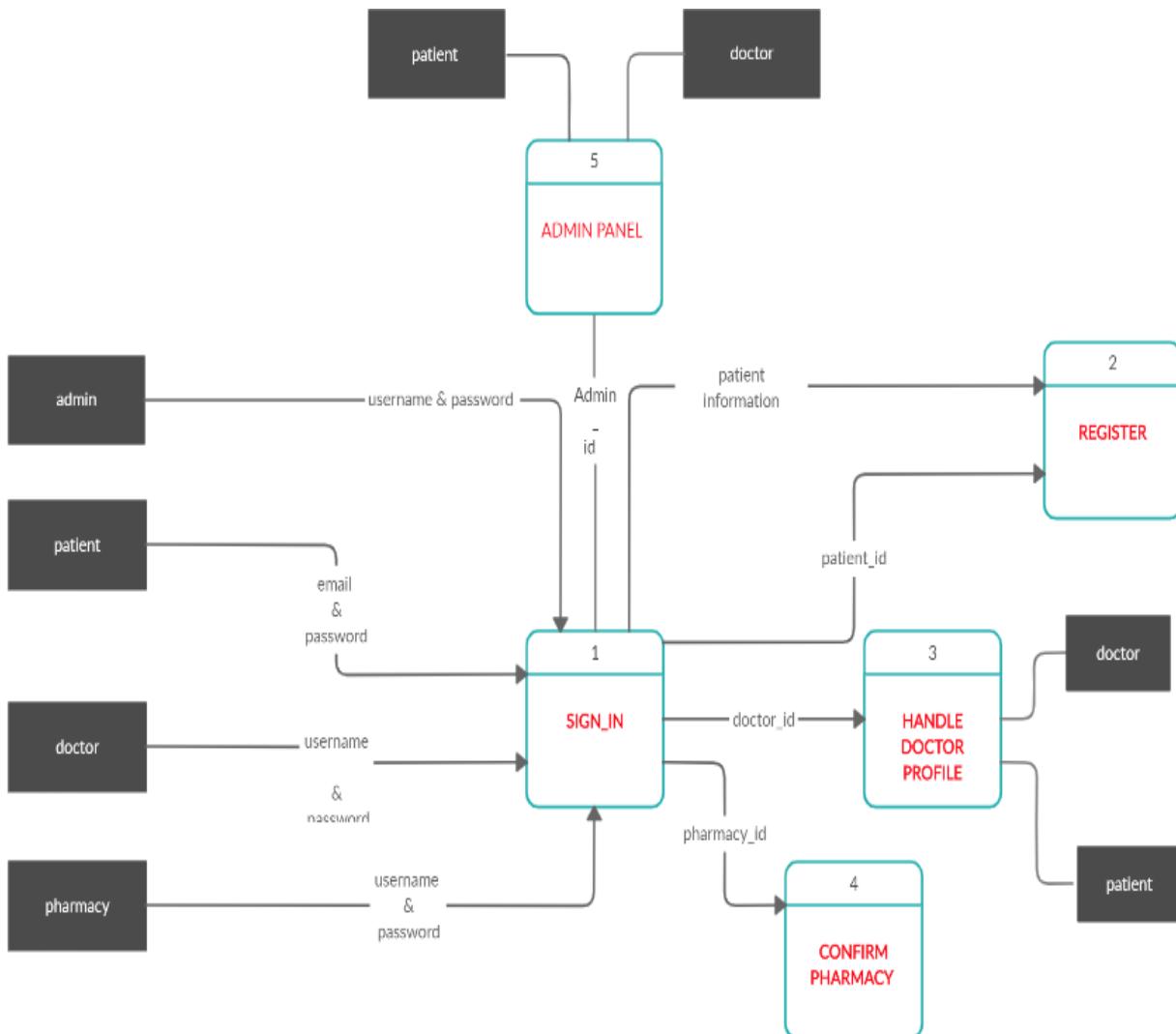
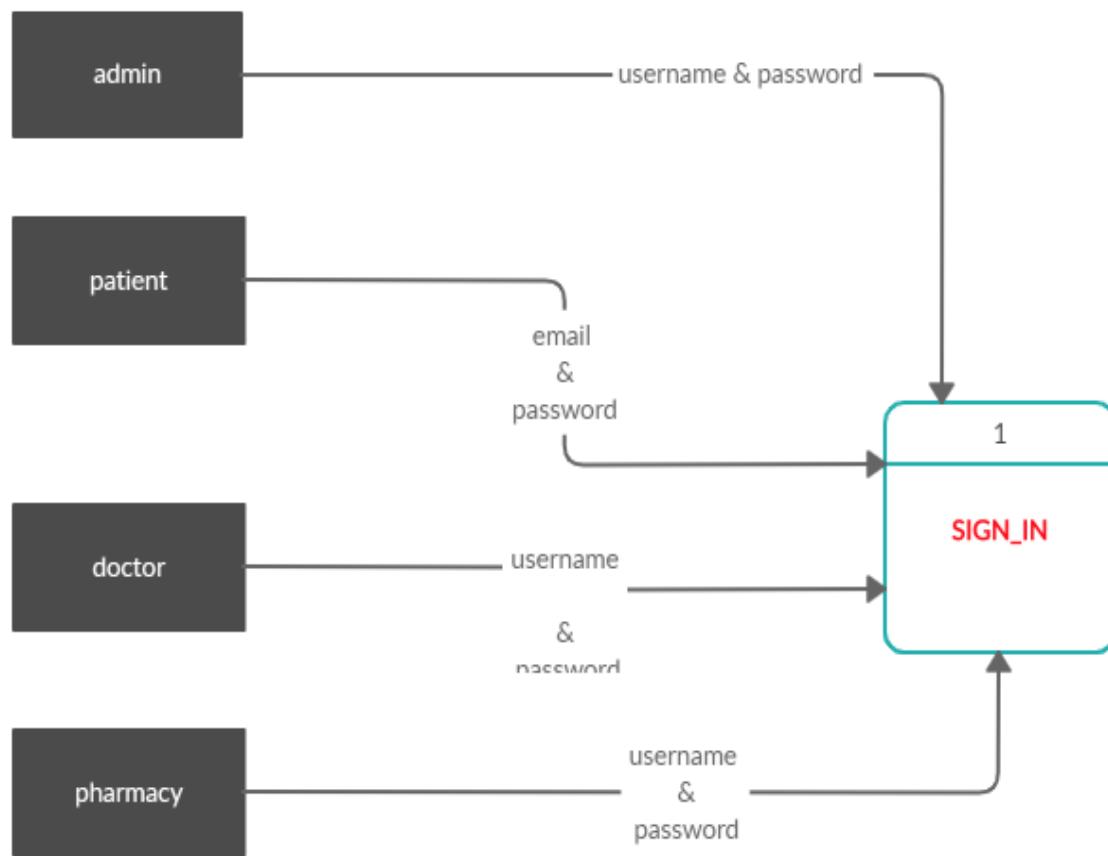


Figure 4.6 level 0 of DFD

- Level 1 DFD for process 1 (sign-In)

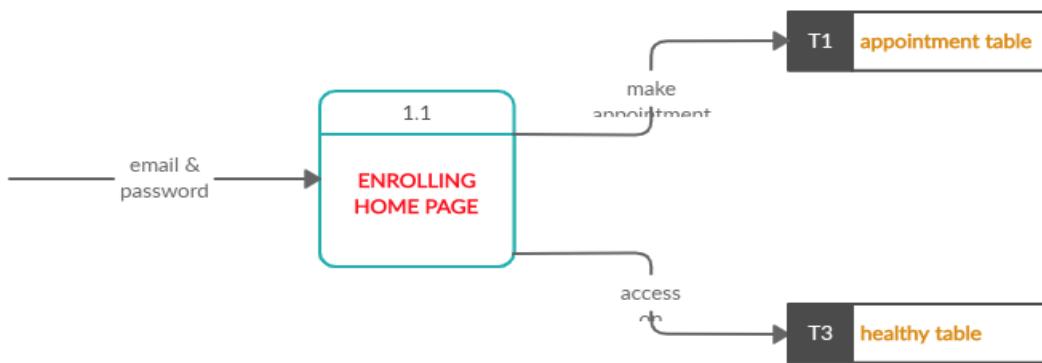
The log-in process is separate into two process (Enter web page – Display sign-in for profile page). It make new level of DFD and every process has its input and output and add his



information and connect to database.

- **Level 1 DFD for process 1.1(enrolling home page)**

The Enrolling home page process is separate into two process (make appointment –access on healthy table). It make new level of DFD and every process has its input and output and add his information and connect to database.



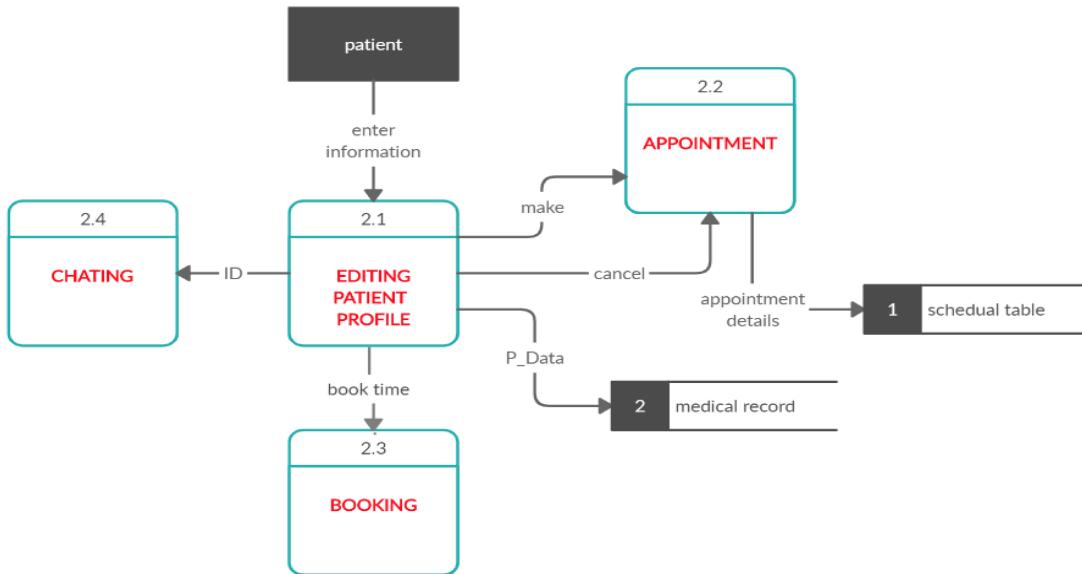
- **Level 1 DFD for process 2 (register)**

The registration process is separate into two process (Enrolling page – Display profile page). It make new level of DFD and every process has its input and output and connect to database.



- **Level 2 DFD for process 2.1 (editing patient profile)**

The patient can edit his information on his profile, it make new Level of DFD and every process has its input and output and connect to database.

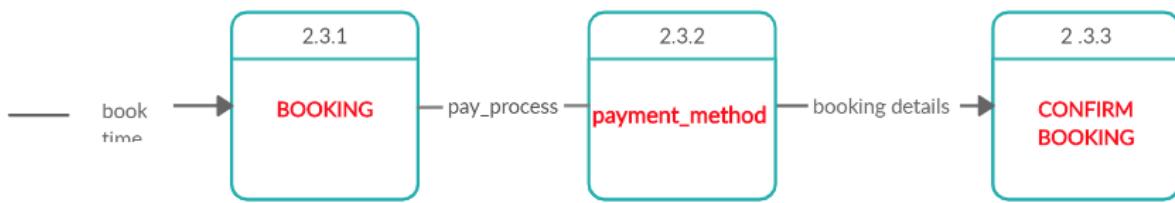


- **Level 2 DFD for process 2.2 (appointment)**

The Browse appointment process, patient can make his appointment. It make new level of DFD and every process has its input and output and connect to database.

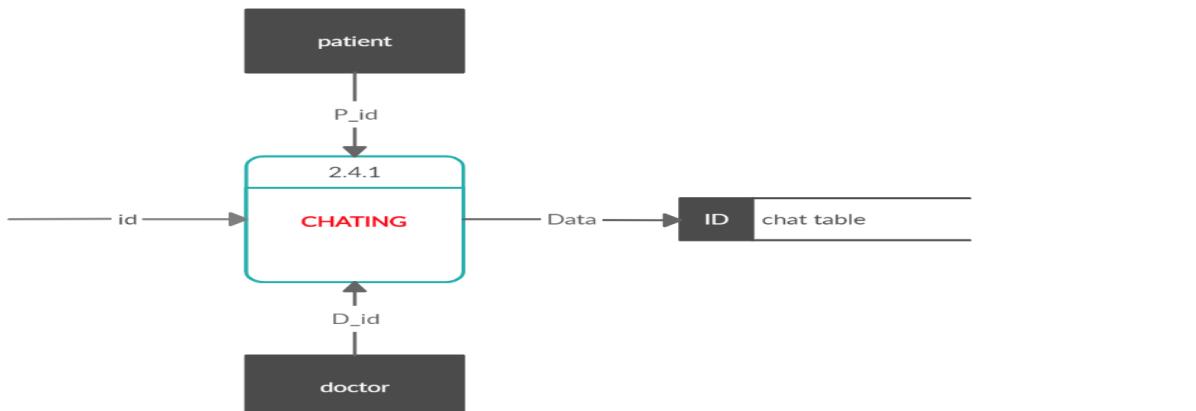
- **Level 2 DFD for process 2.3 (booking)**

The Browse booking process that is the separated process in patient profile is separate into two process (select the doctor _ select the book time). It make new level of DFD and every process has its input and output and connect to database.



- **Level 2 DFD for process 2.4.1 (chatting)**

The chatting process that is the separated process in patient profile and profile doctor is separate into two process (start chat _end chat). It make new level of DFD and every process has its input and output and connect to database.



- **Level 3 DFD for process 3.1 (handle doctor profile)**

The doctor can edit his information on his profile .It make new level of DFD and every process has its input and output and connect to database.

- **Level 3 DFD for process 3.2 (check booking time)**

The doctor can check booking time on his profile .It make new level of DFD and every process has its input and output and connect to database.

- **Level 3 DFD for process 3.2.1 (check booking time availability)**

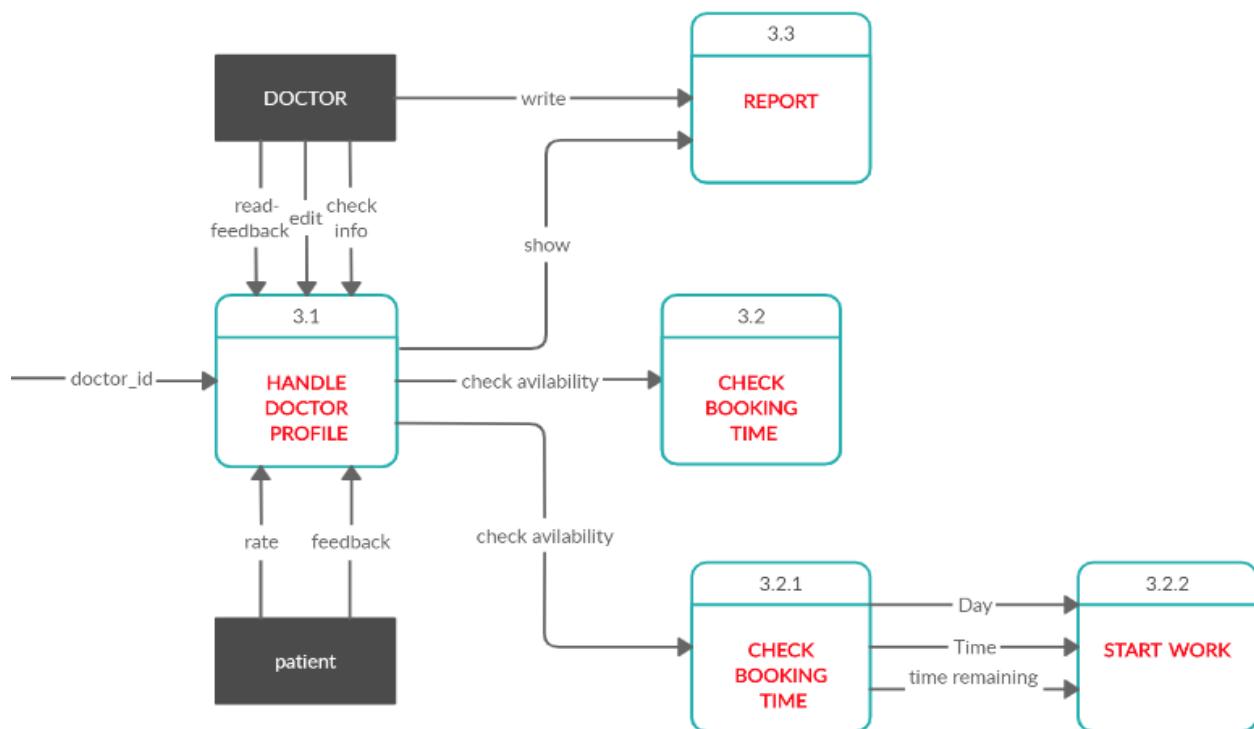
The doctor can check availability on his booking page .It make new level of DFD and every process has its input and output and connect to database

- **Level 3 DFD for process 3.2.2 (Start work)**

The doctor can check day, time and time remaining on his profile .It make new level of DFD and every process has its input and output and connect to database.

- **Level 3 DFD for process 3.3 (Report)**

The doctor can write a report for patient. It make new level of DFD and every process has its input and output and connect to database.

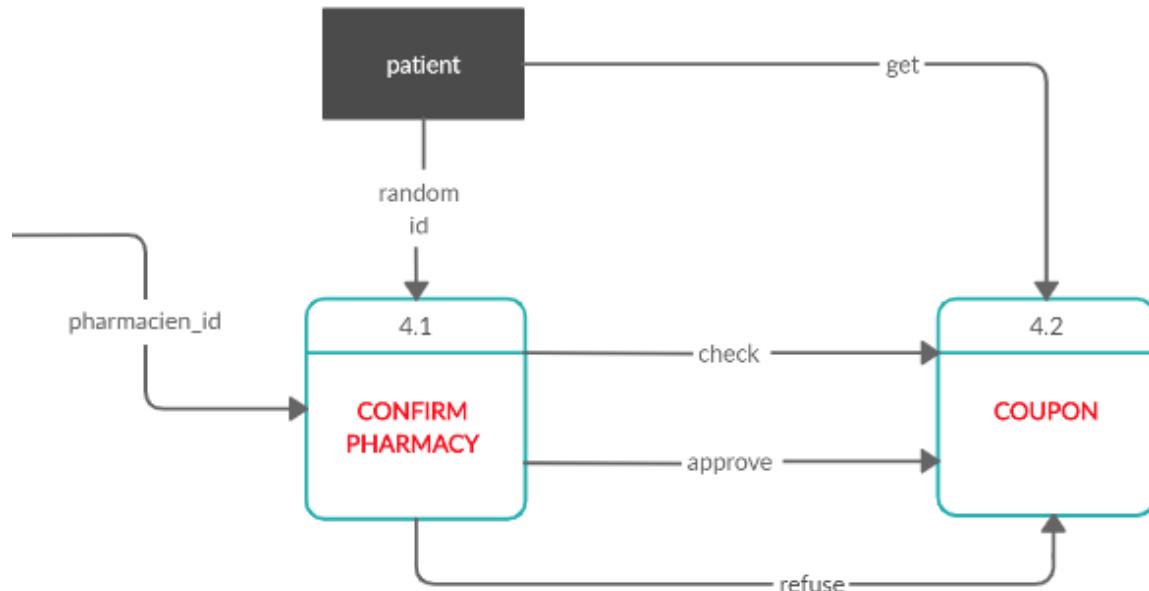


- **Level 4 DFD for process 4.1 (Confirm pharmacy)**

The pharmacist can check, approve and refuse the coupon from patient. It makes new level of DFD and every process has its input and output and connect to database.

- **Level 4 DFD for process 4.2 (Coupon)**

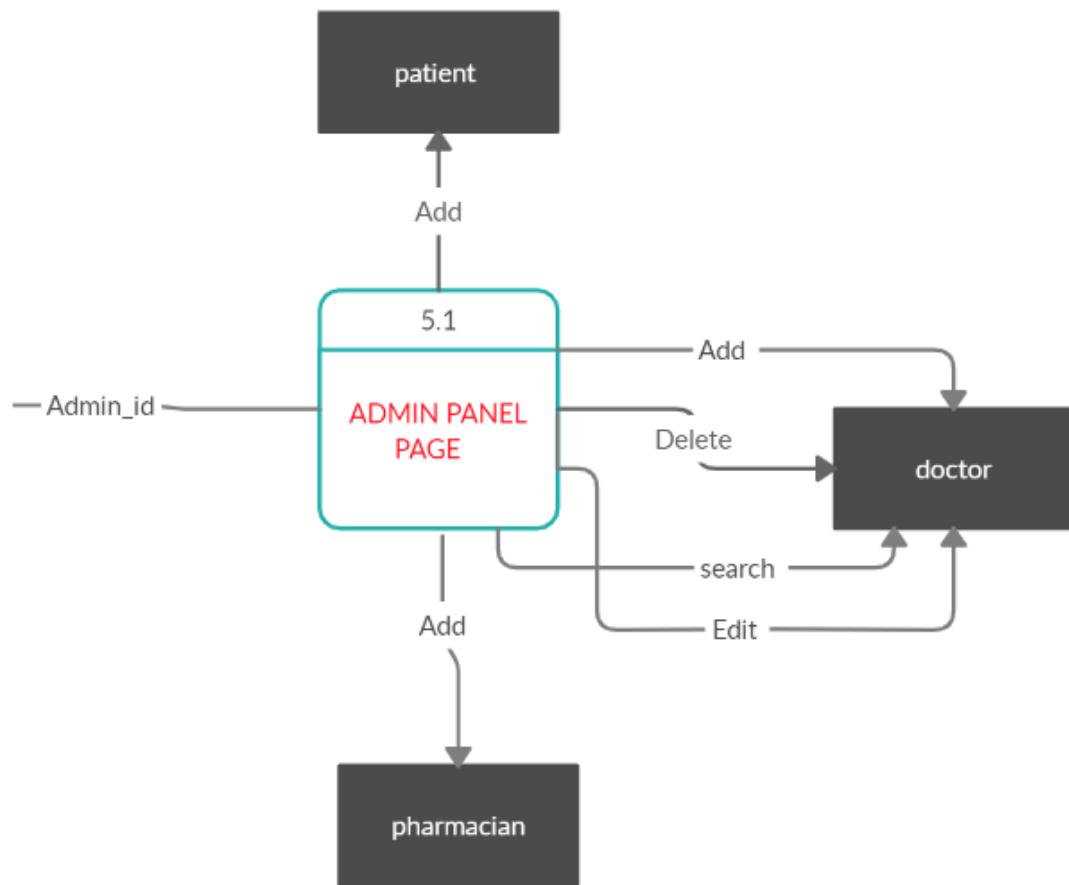
The coupon gets to patient. It makes new level of DFD and every process has its input and output and connect to



database.

- **Level 5 DFD for process 5.1 (Admin panel page)**

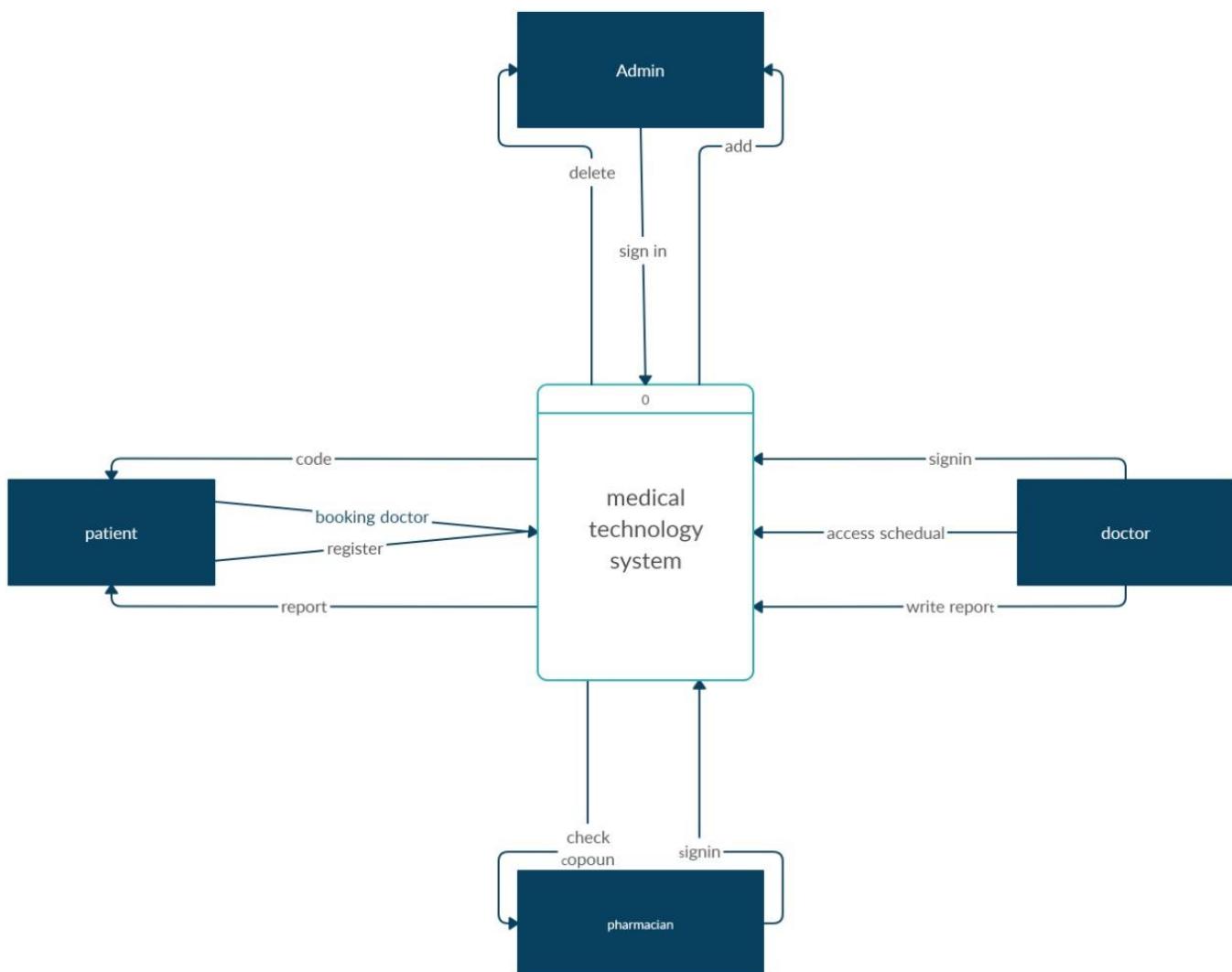
The admin can add, edit and delete patient or doctor in control panel .It make new level of DFD and every process has its input and output and connect to database.



3. Context free diagram (CFD):-

Is a diagram that defines the boundary between the system, or part of a system, and its environment, showing the entities that interact with it. This diagram is a high level view of a system. It is similar to a block diagram.

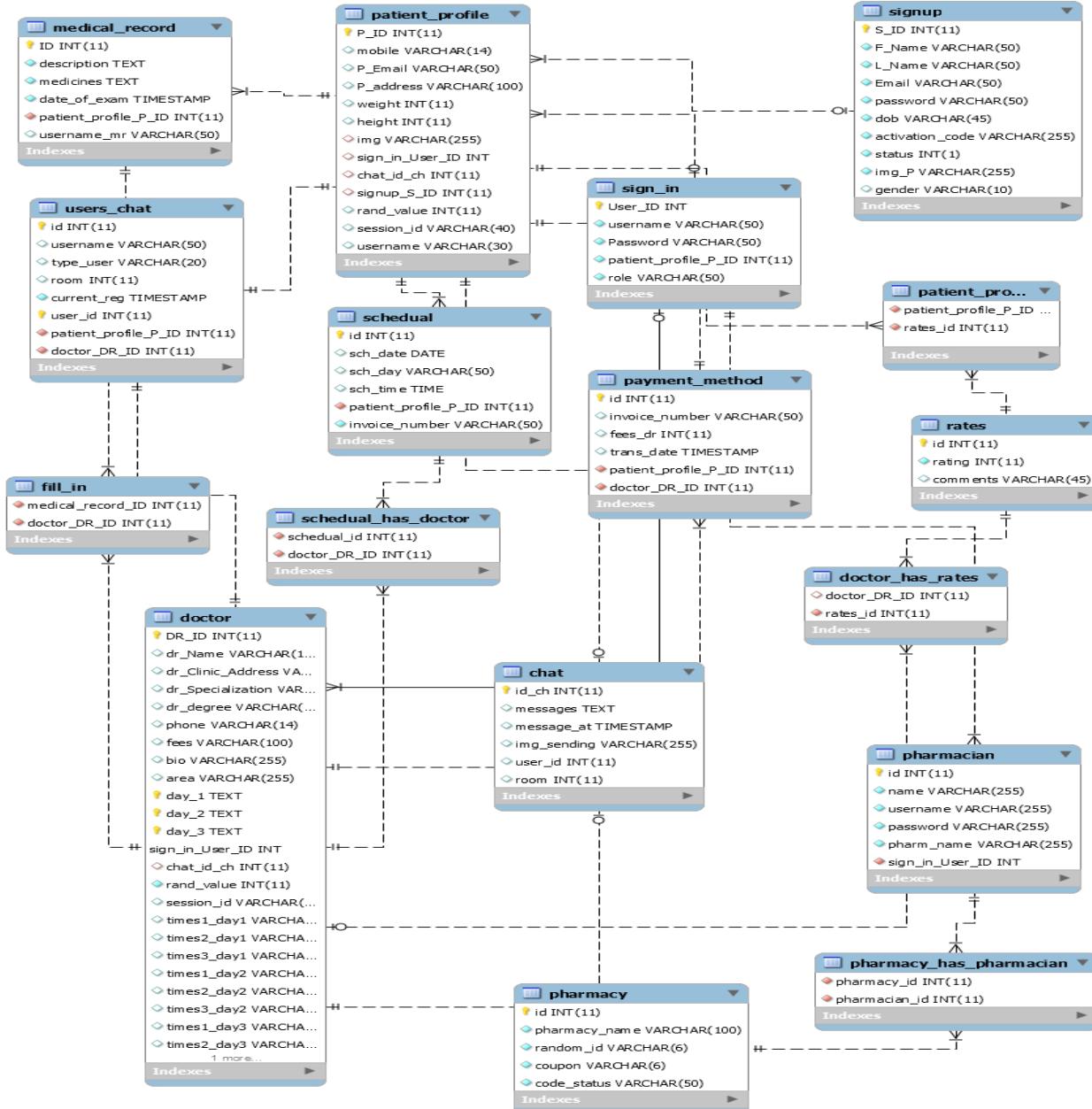
It shows the relationship that the system has with other external entities (systems, organizational groups, external data



stores, etc.).

4. Entity-relationship diagram (ERD):-

It describes inter-related things of interest in a specific domain of knowledge. An ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between instances of those entity types.



Chapter 5

Design Phase

5.1 Overview:-

The project team and the client have focused on high-level questions regarding the project. These start with simple questions like "why is this solution important?" "What is the business value?" and "what are we going to deliver?" In the Design Phase, these questions are taken to a lower level of detail, and you start to ask the "how" questions. The big one is "how will we build this solution?"

At this point, the project team should have a complete set of requirements to work from, a set of direction-setting strategies and a Conceptual Systems Design. The design process comes next. Even if the project was small and the requirements were simple, there is still a mental design process that occurs in between understanding the requirements and starting to construct. Design becomes more and more important as the project becomes larger and more complex. Once you complete the requirements, you will typically see a myriad of alternatives for construction. These alternatives include the tools and technology you will utilize, the scalability of the solution, and the structure of the components you will build. The Design Phase is where you look at the many potential solutions and narrow down the choices to determine the most effective and efficient way to construct the solution. The Design Phase answers the questions about "how" you will build the best solution.

At the end of the Design Phase, you will have a logical solution defined. The solution is "logical" because it exists on paper or in a design tool. This logical solution is then passed to the Construct Phase, where the logical solution is turned

into a physical solution. However, the people that specialize in constructing the solution will not have to worry about the myriad possibilities. That guidance will be provided to them through the work in the Design Phase. The people working to construct the solution can use their talents to build the solution based on the deliverables produced during the Design Phase.

5.2 Tools used in design:-

1) Previous templates

Is previous design made by someone and we used it and modifying the template to fit our project. In this template it has its own JavaScript and CSS that make it appear beautiful.

2) HTML

HTML is a markup language for describing web documents (web pages).

- HTML stands for Hyper Text Markup Language.
- A markup language is a set of markup tags.
- HTML documents are described by HTML tags.
- Each HTML tag describes different document content.

The purpose of a web browser (Chrome, IE, Firefox, and Safari) is to read HTML documents and display them. The browser does not display the HTML

tags, but uses them to determine how to display the document.

3) Cascading Style Sheets (CSS)

Is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML documentation, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

4) Bootstrap

Is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Bootstrap is a web framework that focuses on simplifying the development of informative web pages (as opposed to web apps). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project. As such, the primary factor is whether the developers in charge find those choices to their liking. Once added to

a project, Bootstrap provides basic style definitions for all HTML elements. The result is a uniform appearance for prose, tables and form elements across web browsers. In addition, developers can take advantage of CSS classes defined in Bootstrap to further customize the appearance of their contents. For example, Bootstrap has provisioned for light- and dark-colored tables, page headings, more prominent pull quotes, and text with a highlight. Bootstrap also comes with several JavaScript components in the form of jQuery plugins. They provide additional user interface elements such as dialog boxes, tooltips, and carousels. Each Bootstrap component consists of an HTML structure, CSS declarations, and in some cases accompanying JavaScript code. They also extend the functionality of some existing interface elements, including for example an auto-complete function for input fields.

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5) JavaScript:-

Is a high-level, dynamic, UN typed and interpreted programming language. It has been standardized in the

ECMAScript language specification. Alongside HTML and CSS, it is one of the three core technologies of World Wide Web content production; the majority of websites employ it and it is supported by all modern web browsers without plug-ins. JavaScript is prototype-based with first-class function, making it a multi-paradigm language, supporting object oriented, imperative, and functional programming styles. It has an API for working with text, arrays, dates and regular expression, but does not include any I/O such as networking, storage or graphics facilities, relying for these upon the host environment in which it is embedded.

Although there are strong outward similarities between JavaScript and Java, including language name, syntax, and respective standard libraries, the two are distinct languages and differ greatly in their design. JavaScript was influenced by programming languages such as self and scheme.

6) Java Server Pages (JSP):-

Is a technology that helps software developers create dynamically generated web pages based on HTML, XML, or other document types. Released in 1999 by Sun Microsystem, JSP is similar to PHP and ASP, but it uses the java programming language. To deploy and run java server pages, a compatible web

server with a servlet container, such as Apache, Tomcat or Jetty is required.

7) AJAX:-

is a set of web development techniques using many web technologies on the client side to create asynchronous web applications. With Ajax, web applications can send and retrieve data from a server asynchronously (in the background) without interfering with the display and behavior of the existing page. By decoupling the data interchange layer from the presentation layer, Ajax allows web pages and, by extension, web applications, to change content dynamically without the need to reload the entire page. In practice, modern implementations commonly utilize JSON instead of XML.

8) PHP:-

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of a HTTP response. Various web template systems, web content

management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. Additionally, PHP can be used for many programming tasks outside of the web context, such as standalone graphical applications and robotic drone control. Arbitrary PHP code can also be interpreted and executed via command-line interface (CLI).

9) SQL:-

Is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). It is particularly useful in handling structured data, i.e. data incorporating relations among entities and variables.

5.3 Home Page and its advantages:-

1- From here you can find out everything on the site and you can see the offers and you can register as a user.

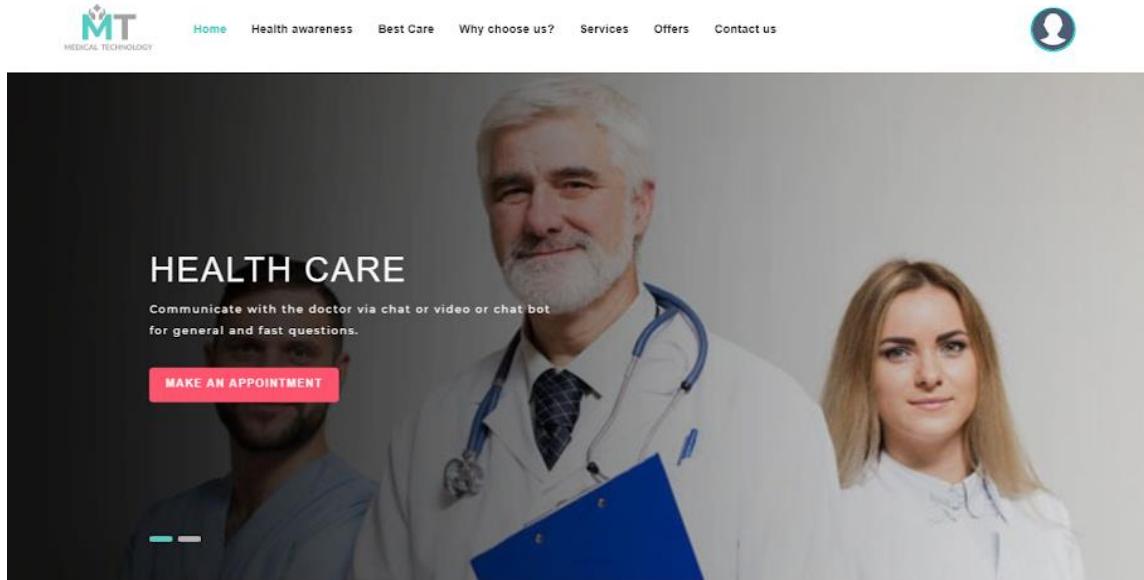


Figure 5.1 Home Page (Sign in and everything the site offers)

2- Here are tips for getting the best care for your good health.

Welcome to Medical Technology

Best Care For Your Good Health

1. Don't fear coffee.
2. Eat vegetables and fruits.
3. Don't drink sugar calories.
4. Avoid processed junk food (eat real food instead).
5. Don't smoke or do drugs, and only drink in moderation.



Figure 5.2 Home Page (Best Care for Your Good Health)

3- Here are some interesting stats that make people choose us.

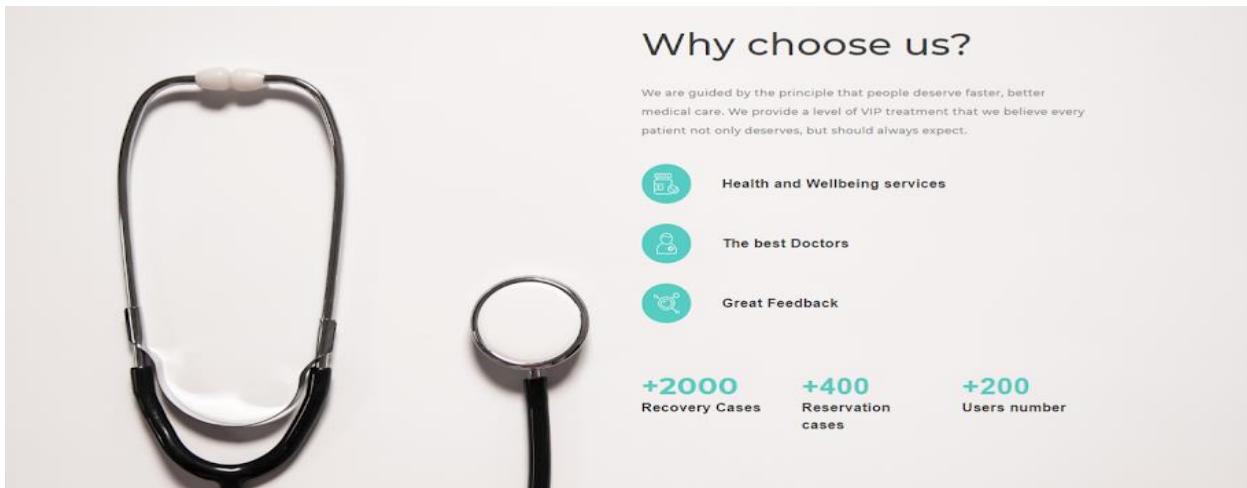


Figure 5.3 Home Page (Why choose us?)

4- Here are the features and services provided by the platform.

Our Services

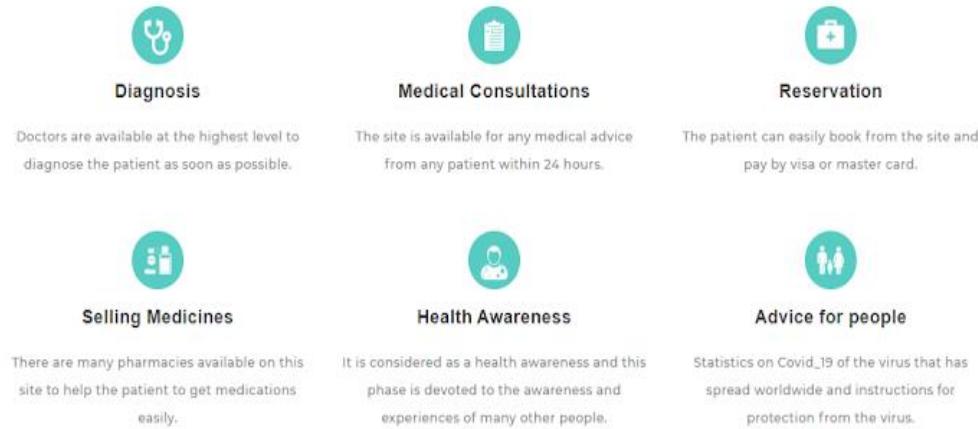


Figure 5.4 Home Page (Features and Services)

5- Here offers and discounts are placed.

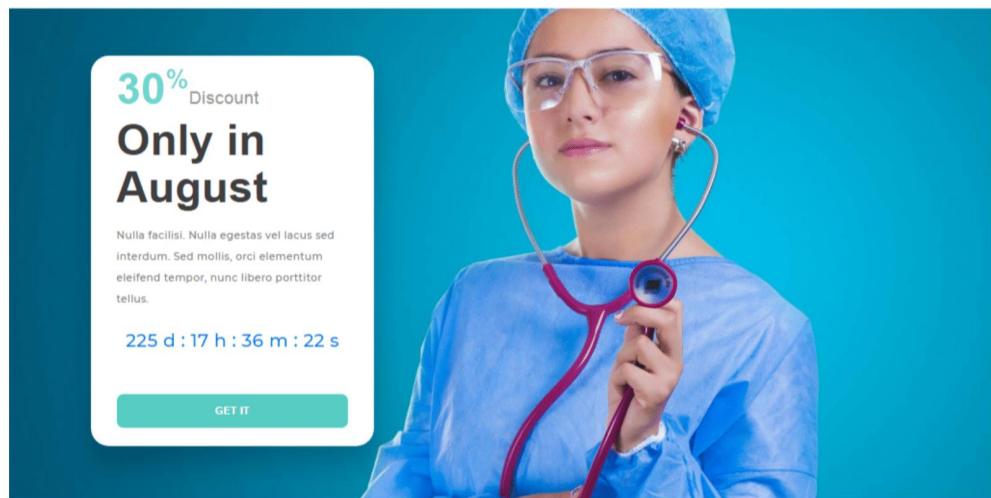


Figure 5.5 Home Page (offers and discounts available)

5.4 Admin privileges and his own pages:-

1- From here Admin can sign in account with his username and password to manage everything.

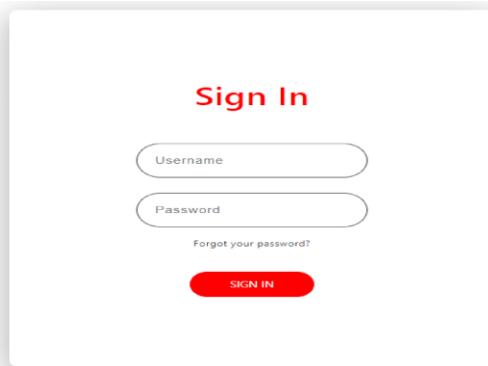


Figure 5.6 Sign in Admin Page

2- From here admin can manage everything in the system like: you can add and delete Users (Doctors – Patient) to the system.

A screenshot of the "ADMIN PANAL" dashboard. The top navigation bar includes the logo "MT MEDICAL TECHNOLOGY", the title "ADMIN PANAL", and a user profile picture. The main dashboard area has a blue header with the text "Dashboard" and "Home / Dashboard". Below the header are three summary cards: "Doctors Counter 200" (white background), "User 3,000" (green background), and "Patients Counter 500" (red background). A teal box displays "Wallet Balance \$3,567.53". The central part of the page is a table listing five doctors with columns for "Doctor Name", "Doctor Address", "Doctor Specialization", "Doctor Degree", "Doctor Phone", "Doctor Vezita", "Doctor Bio", "Doctor Image", and "Doctor Area". Each row shows a doctor's name, initials, address, specialization (e.g., eyes, dermatology, student), contact information, bio, profile picture, and location (e.g., zyтом, misr el gededa, zarnalek, alex, naser city). The footer contains the copyright notice "© Medical Technology Team".

Figure 5.7 Admin Page

3- From here admin can add New Doctor.

The screenshot shows the Admin Panel dashboard with a blue header. On the left, there's a sidebar with a user profile picture, 'Welcome, Amr', and navigation links for 'MAIN' and 'Dashboard'. The main area has four cards: 'Doctors Counter 200', 'user 3,000' (green background), 'Patients Counter 500' (red background), and 'Wallet Balance \$3,567.53' (teal background). Below these is a section titled 'Add User' with fields for 'username', 'Password', 'Select Role' (a dropdown menu), and a large 'Add User' button. At the bottom right of this section is a 'Forgot Password?' link. The footer of the page says '© Medical Technology Team'.

Figure 5.8 Add New Doctor Page

4- From here admin can edit or delete doctor.

The screenshot shows the Admin Panel dashboard with a blue header. The sidebar on the left includes 'Welcome, Amr', 'MAIN', and 'Dashboard'. The main area features four cards: 'Doctors Counter 200', 'user 3,000' (green), 'Patients Counter 500' (red), and 'Wallet Balance \$3,567.53' (teal). Below these is a 'Search Doctor' section with a 'Doctor Name' input field and a 'Search Doctor' button. Underneath is a table with columns: Doctor Name, Doctor Address, Doctor Specialization, Doctor Degree, Doctor Phone, Doctor Vezita, Doctor Bio, Doctor Image, and Doctor Area. Two rows of data are shown:

Doctor Name	Doctor Address	Doctor Specialization	Doctor Degree	Doctor Phone	Doctor Vezita	Doctor Bio	Doctor Image	Doctor Area
KA kamel ahmed sayed	343st wefwsef wfewef fw	eyes	3.5	41200303020101	80	this is something about tamer		zytom
HA hamed ahmed kamel	54 st jfwf wfefwef	eyes	student	23423423243	139	this is something about tamer		zamalek

Each row has 'Edit' and 'Delete' buttons at the end. The footer of the page says '© Medical Technology Team'.

Figure 5.9 Edit or Delete Doctor Page

5- From here admin can edit doctor.

The screenshot shows the Admin Panel dashboard with a blue header and a navigation bar on the left. The main area is titled 'Edit Doctors Information' and contains several input fields for updating a doctor's profile. The fields include:

- Name: kamel ahmed sayed
- Address: 3431t wewwef wfewef fw
- Specialty: eyes
- Rating: 3.5
- License Number: 41200303020101
- Age: 80
- Description: Example textarea
this is something about tamer
- Image: A placeholder image of a person in a white coat.
- Date of Birth: Three dropdown menus for year, month, and day.
- Gender: Male
- Update Doctor button

At the bottom right of the page is a copyright notice: © Medical Technology Team.

Figure 5.10 Edit Doctor Page

6- From here admin can add new patient.

The screenshot shows the Admin Panel dashboard with a blue header and a navigation bar on the left. The main area is titled 'Add Patients' and contains several input fields for adding a new patient. The fields include:

- patient Name
- patient Phone
- patient Address
- Date of Birth: A dropdown menu for selecting a date.
- patient Status
- Image: A placeholder image of a person.
- patient National ID
- Insert Patients button
- Forgot Password? link

At the bottom right of the page is a copyright notice: © Medical Technology Team.

Figure 5.11 Add New patient Page

5.5 Doctor privileges and his own pages:-

1- From here the Doctor can sign in account with his username and password and doctor can manage account and track everything and He can view the health report of his patients.

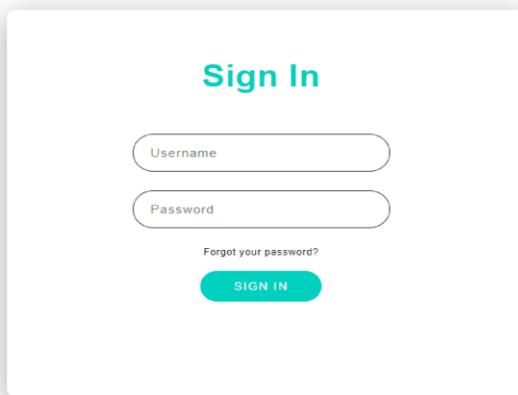


Figure 5.12 Doctor Sign In Page

2- This is the Profile page for the Doctor, and it has complete information for the Doctor, through which the Doctor can update his data, Start Working and check appointments with patients, and can chat with patients.

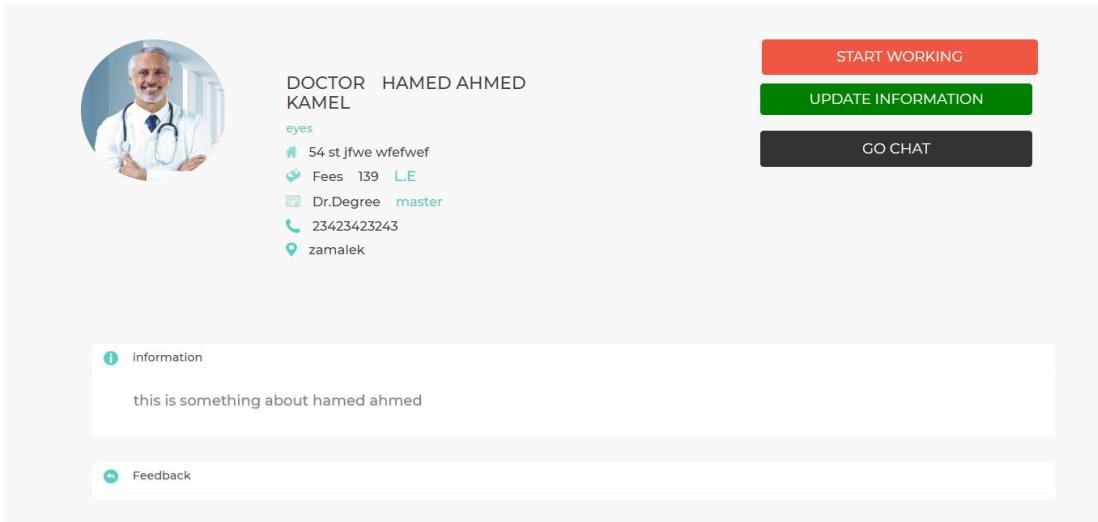


Figure 5.13 Doctor Profile Page

3- This is the Update Profile page for doctor and the doctor can modify all his data from here.



HAMED AHMED KAMEL

PROFILE DOCTOR

MY MEDICAL RECORD

PERSONAL INFORMATION

DOCTOR NAME	hamed ahmed kamel		
DOCTOR CLINIC ADDRESS	54 st jfwe wfefwef		
DOCTOR SPECIALIZATION	eyes		
DOCTOR DEGREE	student		
DOCTOR PHONE	23423423243		
FEES	139		
DOCTOR IMAGE	Choose File	No file chosen	
DOCTOR AREA	zamalek		
DOCTOR BIO	Example textarea this is something about hamed ahmed		
DAY ONE	yyyy-mm-dd	<input type="button" value=""/>	Nothing selected
DAY TWO	yyyy-mm-dd	<input type="button" value=""/>	Nothing selected
DAY THREE	yyyy-mm-dd	<input type="button" value=""/>	Nothing selected

SAVE

Figure 5.14 Update Doctor profile Page

4- Here all the appointments reserved for the doctor to start working.

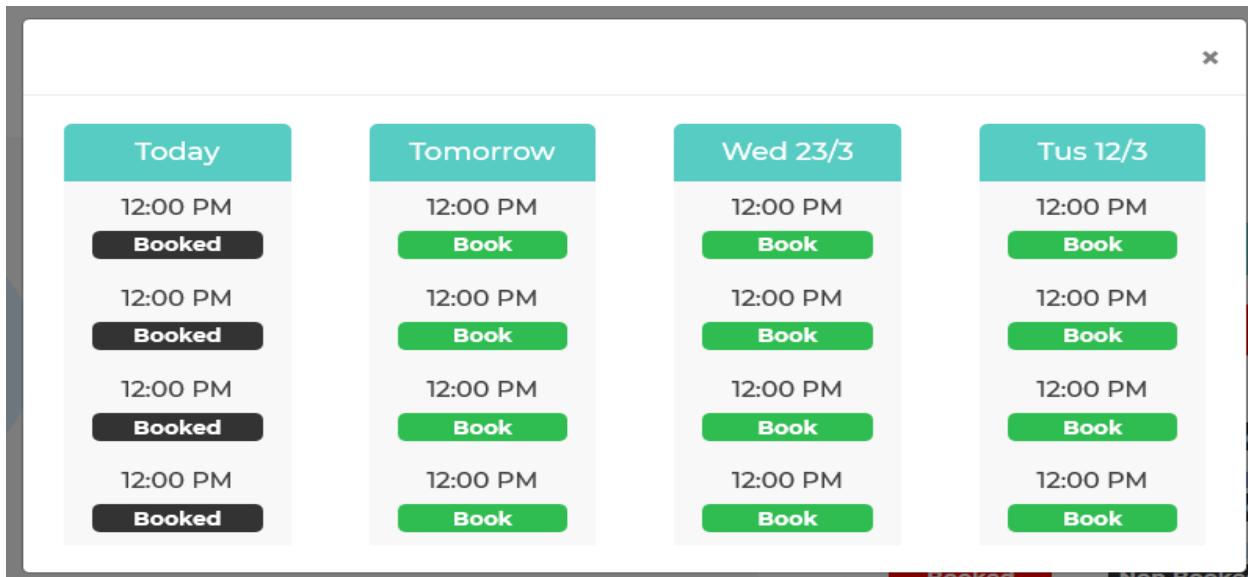


Figure 5.15 Start Working Page

5-This page is a chat page with the patient and the doctor asks the patient about the symptoms, diagnoses his condition and advises him on what to do.

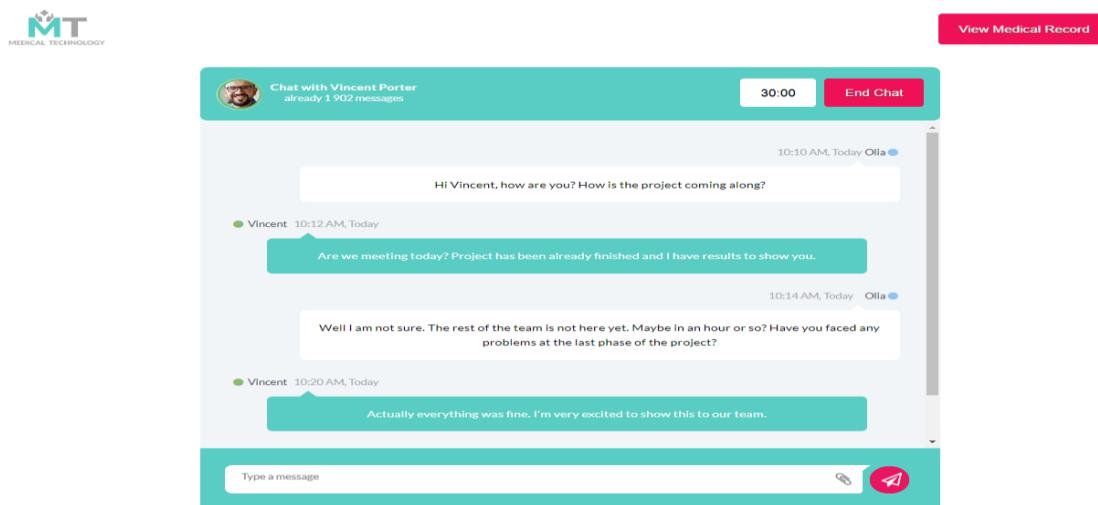
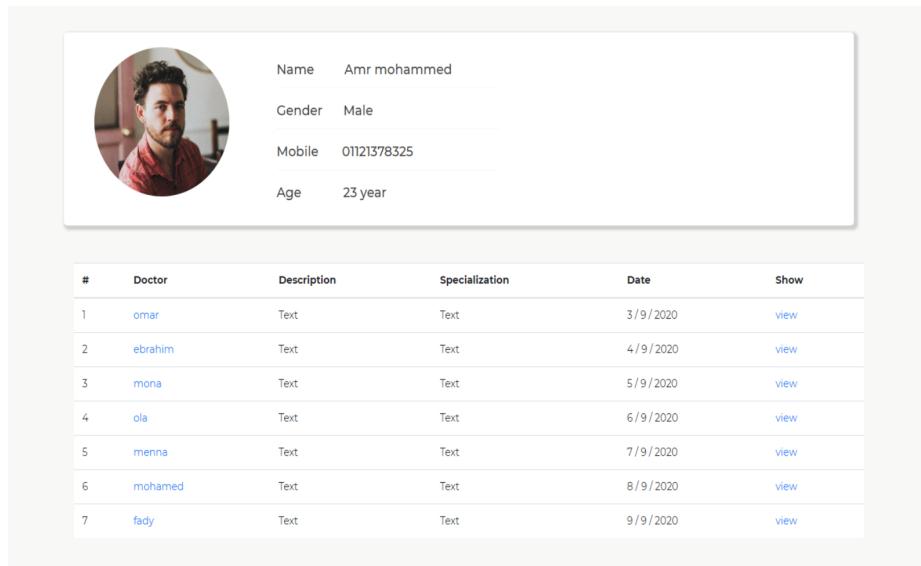


Figure 5.16 Chat Page

6- This is the patient medical record page for the patient and the doctor can see it to review the patient's cases.

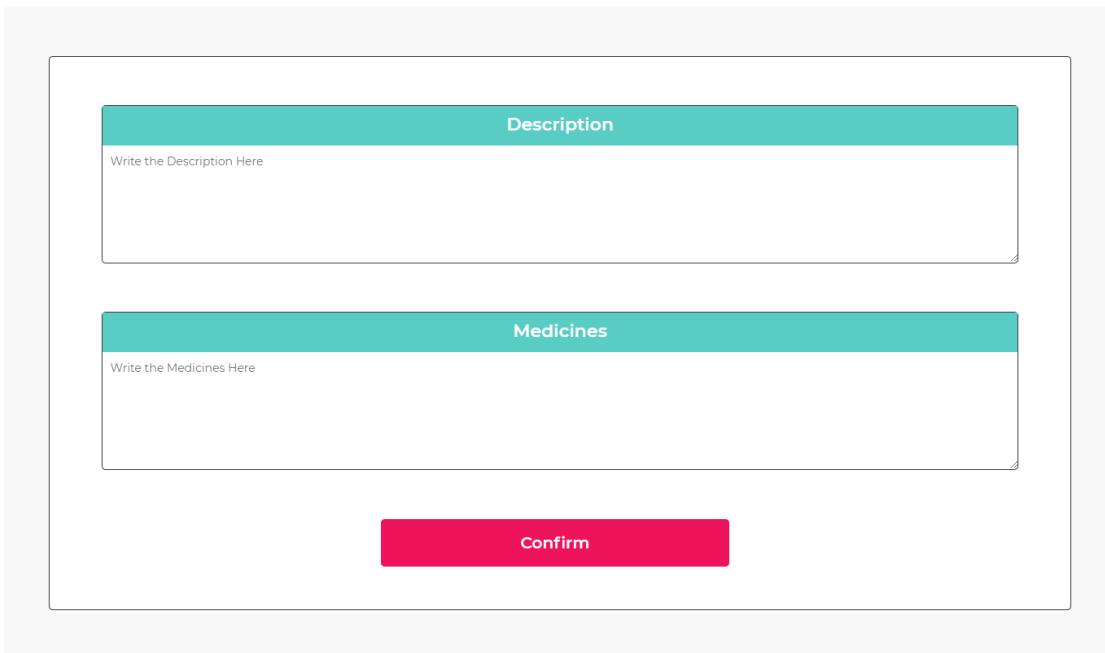


The screenshot shows a patient's medical record page. At the top left is a circular profile picture of a man with dark hair and a beard, wearing a red shirt. To the right of the picture are four data fields: Name (Amr mohammed), Gender (Male), Mobile (01121378325), and Age (23 year). Below this section is a table with a header row and seven data rows. The header row contains columns for #, Doctor, Description, Specialization, Date, and Show (with a 'view' link). The data rows list seven doctors: omar, ebrahim, mona, ola, menna, mohamed, and fady, each with their respective details.

#	Doctor	Description	Specialization	Date	Show
1	omar	Text	Text	3 / 9 / 2020	view
2	ebrahim	Text	Text	4 / 9 / 2020	view
3	mona	Text	Text	5 / 9 / 2020	view
4	ola	Text	Text	6 / 9 / 2020	view
5	menna	Text	Text	7 / 9 / 2020	view
6	mohamed	Text	Text	8 / 9 / 2020	view
7	fady	Text	Text	9 / 9 / 2020	view

Figure 5.17 Patient Medical Record Page

7- This page appears for the doctor upon completion of the chat, writes the report and writes the treatment to the patient.



The screenshot shows a 'Write Report Page'. It features two large text input fields. The top field is labeled 'Description' and has placeholder text 'Write the Description Here'. The bottom field is labeled 'Medicines' and also has placeholder text 'Write the Medicines Here'. At the bottom center is a large red button with the word 'Confirm' in white text.

Figure 5.18 Write Report Page

5.6 Patient privileges and his own pages:-

1- From here the patient can create an account for him on the platform to track everything and book an appointment with a doctor.

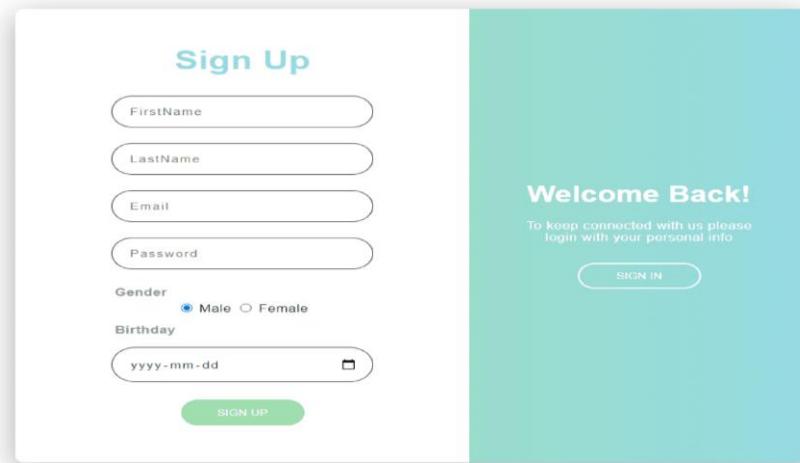


Figure 5.19 Patient Sign Up Page

2- From here the patient can sign in account with his email and password and the patient can track everything and book an appointment with a doctor and he can see his health report.

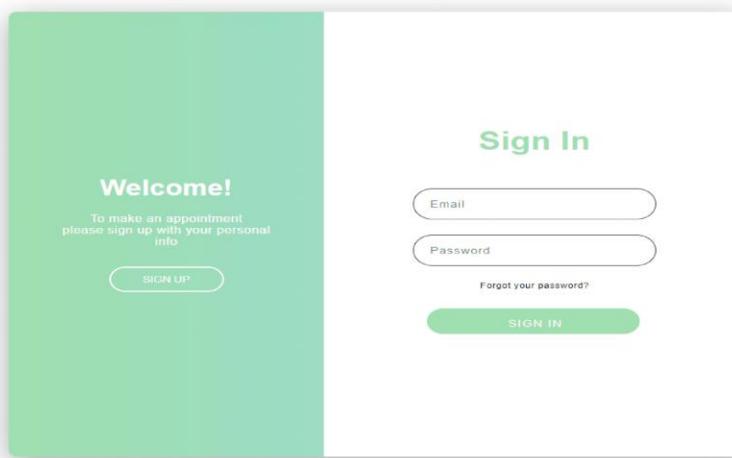
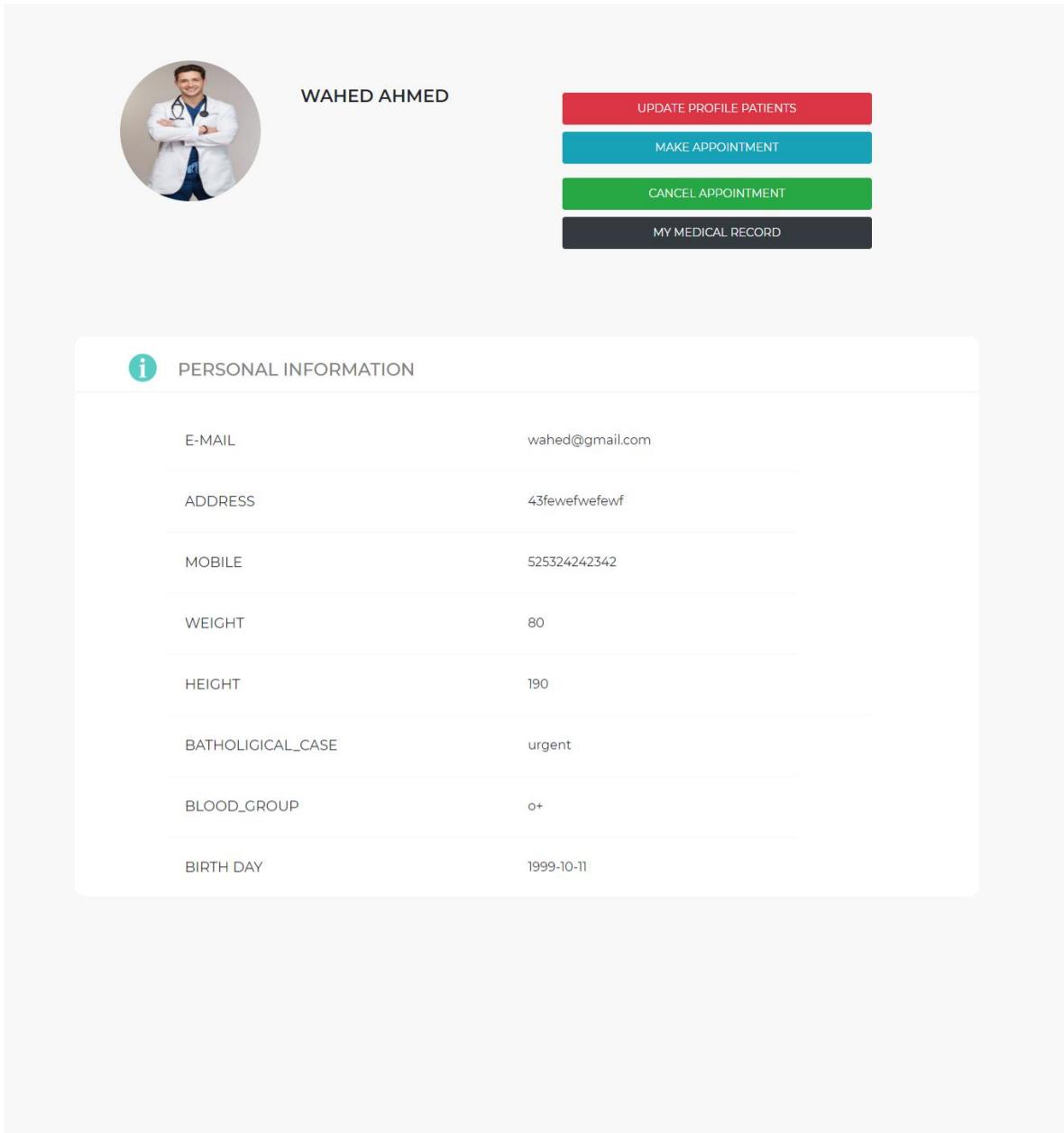


Figure 5.20 Patient Sign in Page

3- This is the Profile page for patient, and it has complete information for patient, through which the patient can update his data, book and appointment with a doctor, cancel an appointment with a doctor, and the patient can view all his health report



The screenshot shows a patient profile page. At the top left is a circular profile picture of a doctor named Wahed Ahmed. To the right of the picture is the name "WAHED AHMED". On the far right, there is a vertical stack of four buttons with rounded corners: a red button labeled "UPDATE PROFILE PATIENTS", a blue button labeled "MAKE APPOINTMENT", a green button labeled "CANCEL APPOINTMENT", and a dark grey button labeled "MY MEDICAL RECORD". Below this header section is a large, light-grey rectangular area containing a table of personal information. The table has two columns: "PERSONAL INFORMATION" on the left and various data fields on the right. The data fields include:

PERSONAL INFORMATION	
E-MAIL	wahed@gmail.com
ADDRESS	43fewefwefewf
MOBILE	525324242342
WEIGHT	80
HEIGHT	190
BATHOLIGICAL_CASE	urgent
BLOOD_GROUP	O+
BIRTH DAY	1999-10-11

Figure 5.21 Patient profile Page

4- This is the Update Profile page for patient and the patient can modify all his data from here.



WAHED AHMED

MY PROFILE
MAKE APPOINTMENT
CANCEL APPOINTMENT
MY MEDICAL RECORD

PERSONAL INFORMATION SAVE

PATIENT ID	5558514545
E-MAIL	wahed@gmail.com
ADDRESS	43fewefwefewf
MOBILE	525324242342
WEIGHT	80
HEIGHT	190
BATHOLICAL_CASE	urgent
BLOOD_GROUP	O+
IMAGE_PATIENT	<input type="button" value="Choose File"/> No file chosen
BIRTH DAY	1999-10-11

Figure 5.22 Update Patient profile Page

5- From here you can see all the doctors on the site and all departments and see the available appointments and choose the preferred doctor for you.

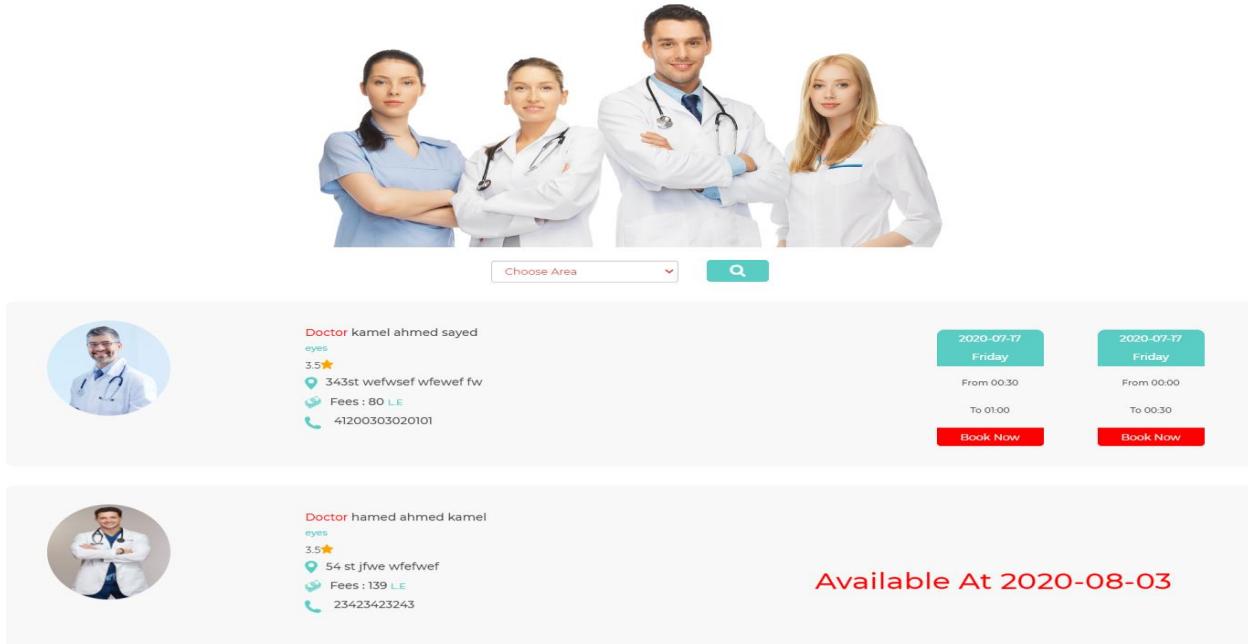


Figure 5.23 Booking page

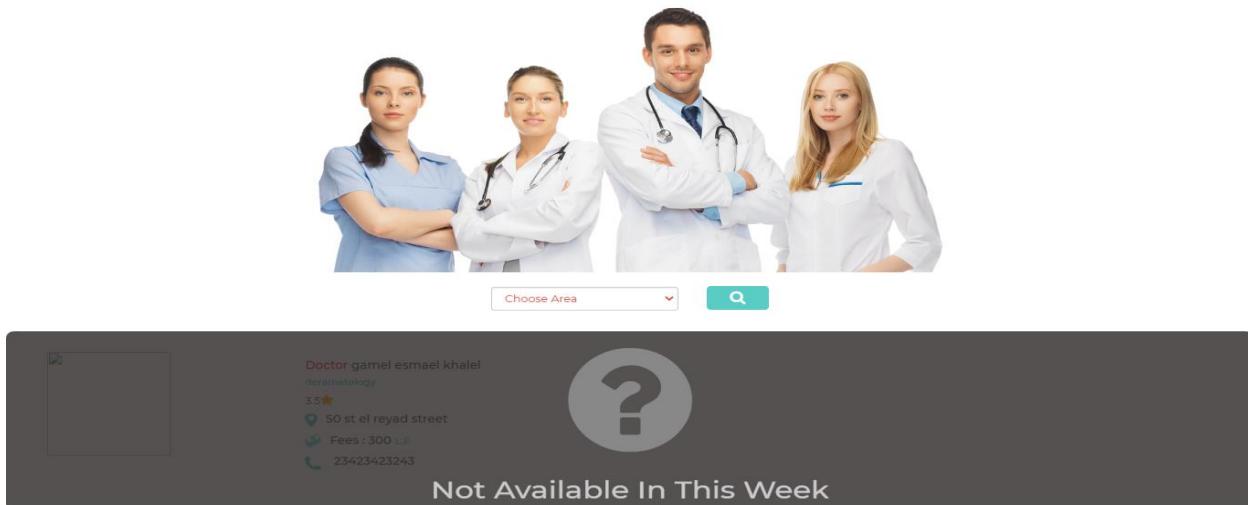


Figure 5.24 Booking (Doctor is not available that week) page

6- From here you can choose the payment method to confirm the reservation with the right doctor for you.

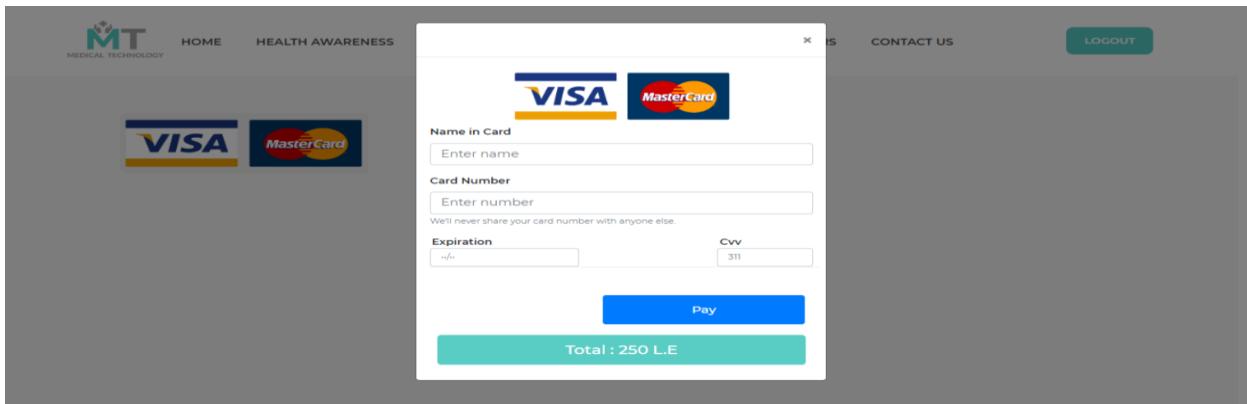


Figure 5.25 Payment Method page

7- This is the confirm booking page for the patient and the patient can book an appointment with the doctor he wants, and when booking, the remaining time to speak with the doctor appears and also the cancel button appears, and this button allows you to cancel the reservation at any time until the appointment arrives with the doctor.

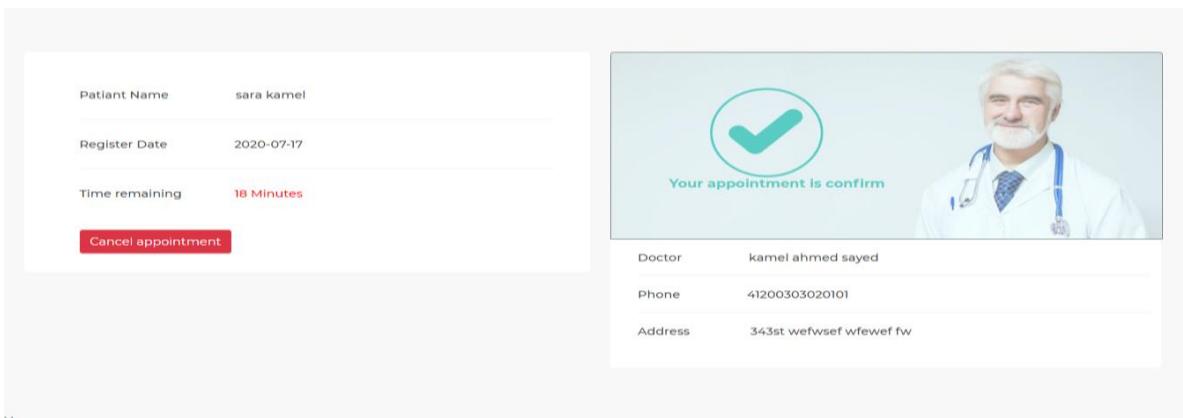


Figure 5.26 Confirm Patient Booking page

8- This is the confirm booking page for the patient when the appointment arrives with the doctor and the patient can start chatting with the doctor and inform him about the symptoms and his health status through the start button.

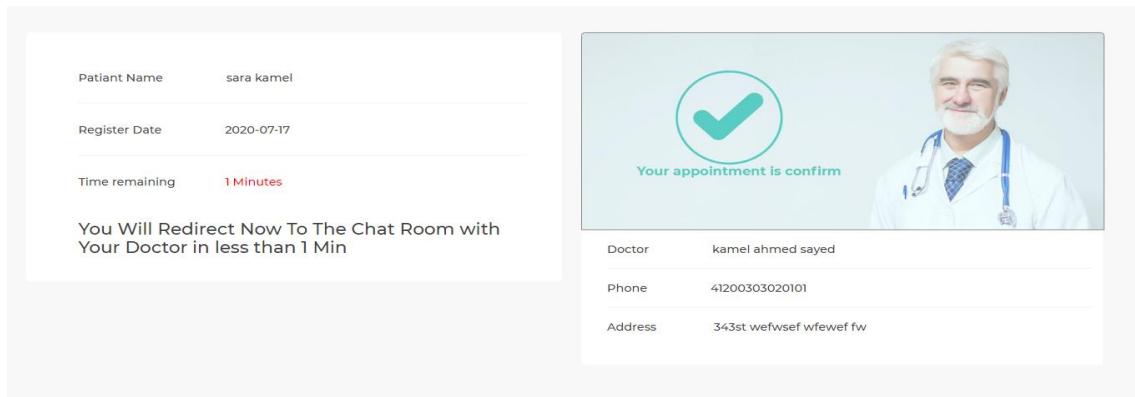


Figure 5.27 Confirm Patient Booking page When the appointment arrives

9- This is the patient medical record page for the patient and this page includes the report of each doctor who treated this patient through the platform and It provides the doctor with an insight into the patient's condition upon re-examination.

Name	Amr mohammed
Gender	Male
Mobile	01121378325
Age	23 year

#	Doctor	Description	Specialization	Date	Show
1	omar	Text	Text	3 / 9 / 2020	view
2	ebrahim	Text	Text	4 / 9 / 2020	view
3	mona	Text	Text	5 / 9 / 2020	view
4	ola	Text	Text	6 / 9 / 2020	view
5	menna	Text	Text	7 / 9 / 2020	view
6	mohamed	Text	Text	8 / 9 / 2020	view
7	fady	Text	Text	9 / 9 / 2020	view

Figure 5.28 Patient Medical Record Page

10-This page is a chat page with the Doctor and you can write the symptoms and your health condition, and the doctor will reply to you with what you do and the medications necessary for you.

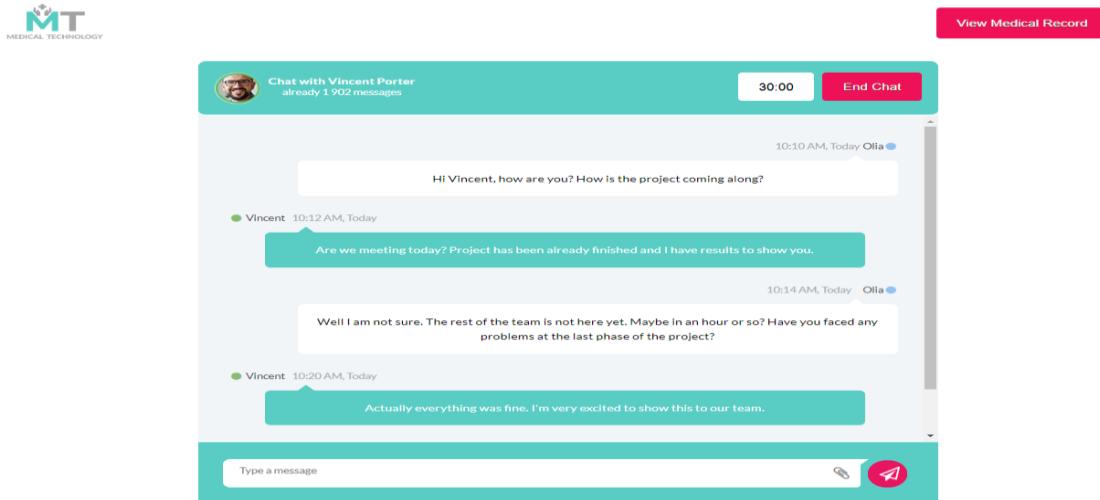


Figure 5.29 Chat Page

11-This page appears for you once you have finished chatting with the doctor to rate the doctor and send a comment (Feedback).

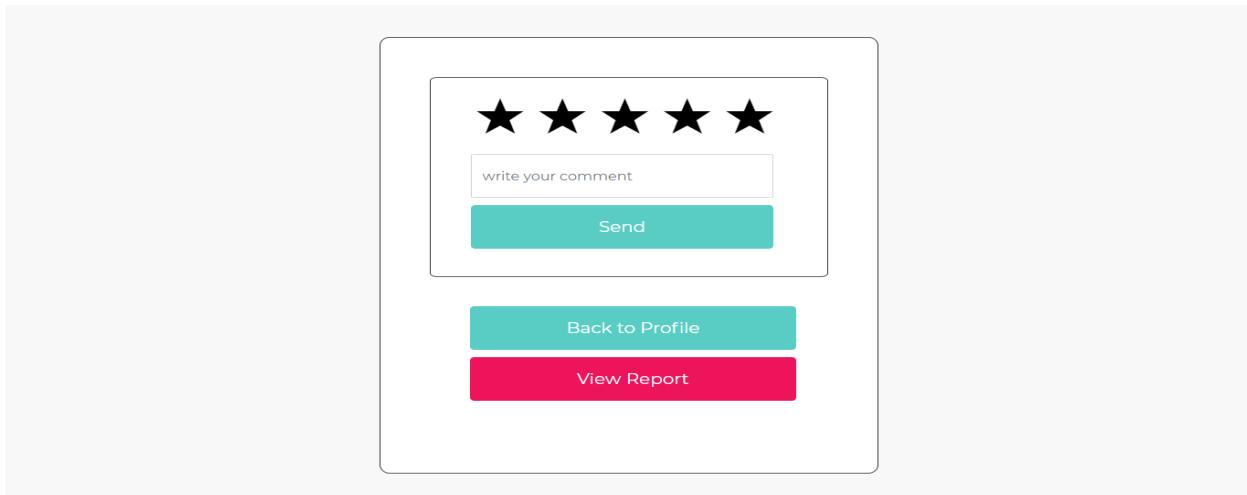
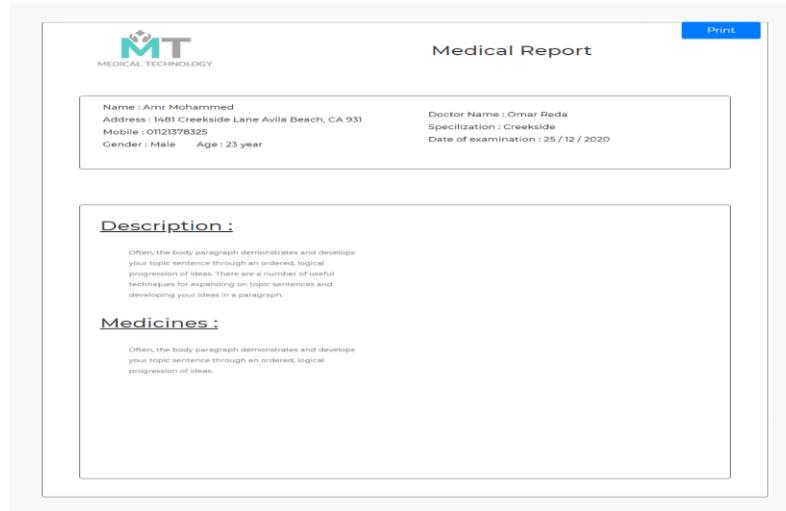


Figure 5.30 Rating Page

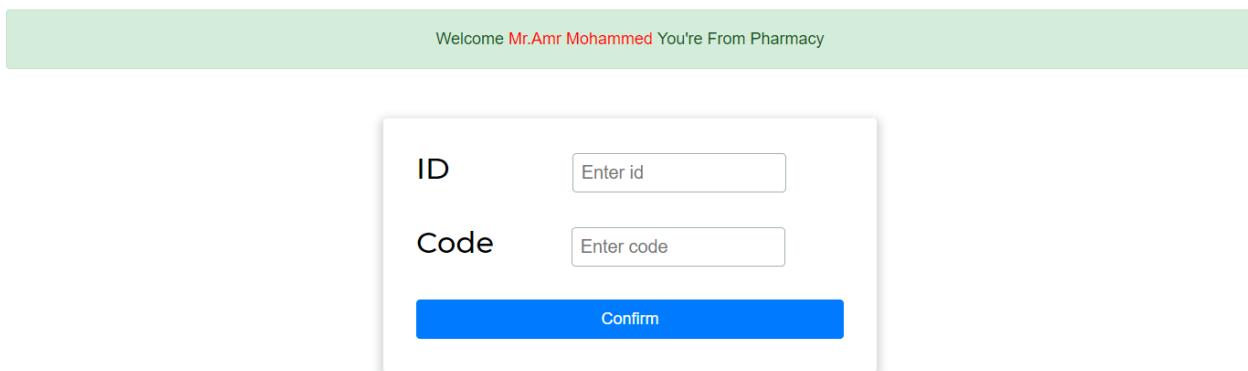
12- This is the patient report page for the patient and this is the health report page that each doctor registers for the patient after the end of his chat, and the patient's condition is diagnosed in addition to the medications that obligate the patient and this report is recorded on the patient's page and allows the doctor to follow the patient's condition when consulting.



The screenshot shows a 'Medical Report' page from 'MT MEDICAL TECHNOLOGY'. At the top right is a 'Print' button. The page contains two sections of patient information: one for the patient (Amr Mohammed) and one for the doctor (Omar Reda). Below this is a 'Description:' section with explanatory text, followed by a 'Medicines:' section with its own explanatory text.

Figure 5.31 Patient Report Page

13-From here you can check the discount code that you got from an email from our site, and this will be in cooperation with pharmacies to offer a discount on medicines from them.



The screenshot shows a 'Confirm' page. At the top, a green bar displays the message 'Welcome Mr.Amr Mohammed You're From Pharmacy'. Below this is a form with two input fields: 'ID' and 'Code', each with an associated text input box ('Enter id' and 'Enter code'). A large blue 'Confirm' button is centered at the bottom of the form.

Figure 5.32 Confirm Pharmacy Page

5.7 Medical information and advice page such as the Covid-19 epidemic:-

1- Here is the talk of the world, which is the Covid-19 epidemic, and here is a tape that talks automatically to provide medical advice to deal with the situation.



Figure 5.33 Covid-19 Page (Health instructions)

2- Here is where the numbers of injuries, recoveries and deaths as a result of Covid-19 epidemic are displayed, and here we use api

(<https://api.thevirustracker.com/free-api?global=stats>)to update the numbers moment by moment.

Also, a graph is shown here to show the injuries and deaths in the world.



Figure 5.34 Covid-19 Page (Covid-19 Cases in the World)

3- Here are healthy instructions for dealing with the epidemic and how to protect yourself and others from infection.

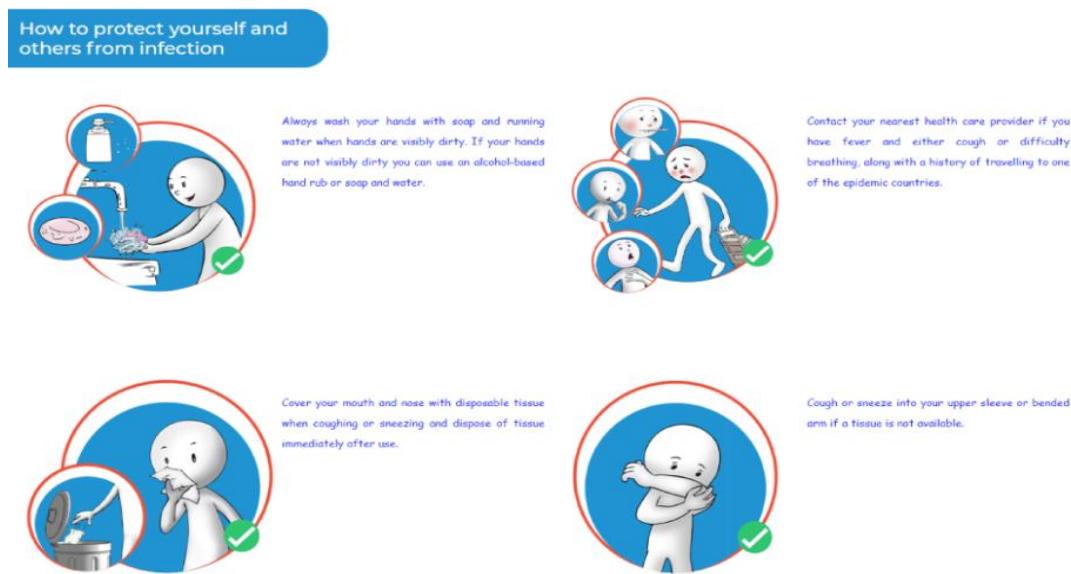


Figure 5.35 Covid-19 Page (How to protect yourself from infection)

4- Here is a video explaining: Recognizing Day to Day Signs and Symptoms of Coronavirus.



Figure 5.36 Covid-19 Page (Recognizing Signs and Symptoms)

5- Here is a group of medical advice from some doctors.

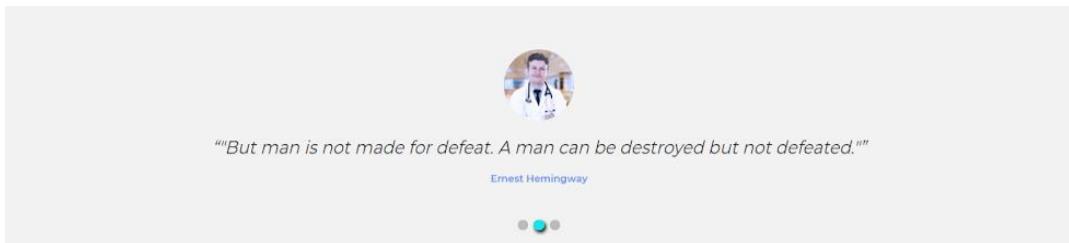


Figure 5.37 Covid-19 Page (Group of medical advice from some doctors)

5.8 The basics of the site:-

Logo:



MEDICAL TECHNOLOGY

Figure 5.38 Medical Technology Logo

Header:

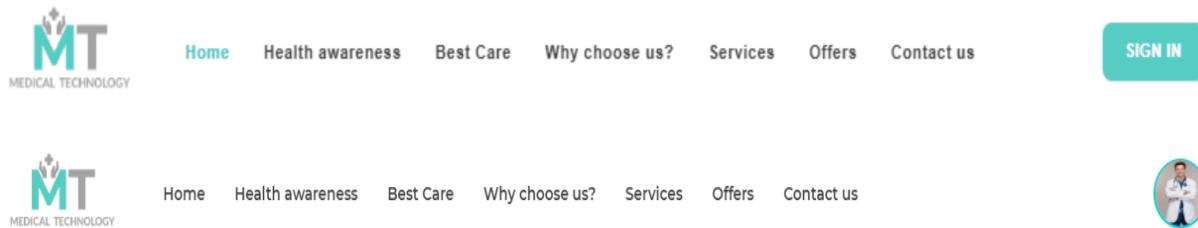


Figure 5.39 Medical Technology Website Header

Footer:

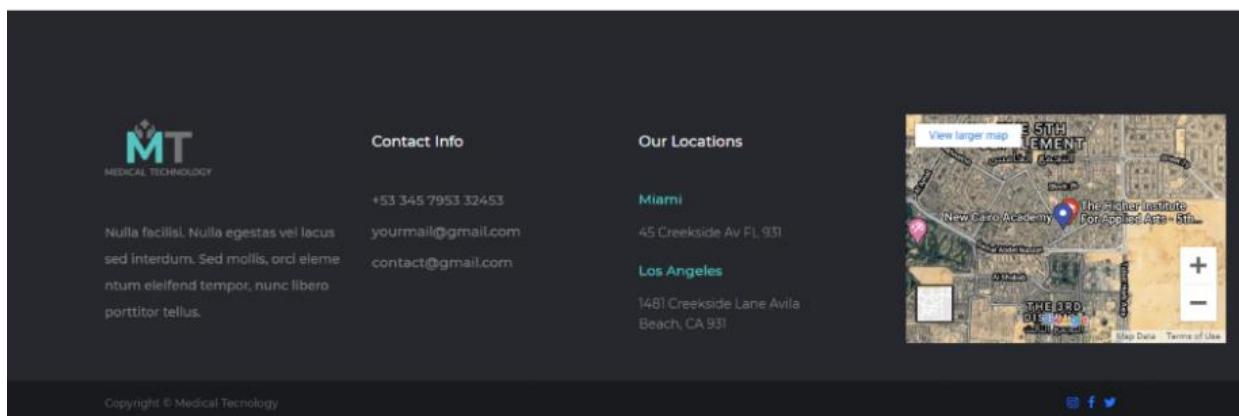


Figure 5.40 Medical Technology Website Footer

Chapter 6

development

Phase

1) Function signup

Using to sign-up for patient , patient adds name , email , gender password and date of birth and insert this information in mySQL.

Then , patient finishes insert the information, patient can not be loged in in the site with an activation code.

The code will send in your email ,then we can activate your account in the site to make log in .

```
function user_reg(){
    $errors = [];

    if(isset($_POST['signup']) == "POST"){
        $f_name = clear($_POST['f_name']);
        $l_name = clear($_POST['l_name']);
        $email = clear($_POST['email']);
        $gender = clear($_POST['gender']);
        $password = clear(md5($_POST['password']));
        $bday = clear($_POST['dob']);
```

```

//activation code generation
$Caracteres = 'ABCDEFGHIJKLMOPQRSTUVWXYZ0123456789';
$QuantidadeCaracteres = strlen($Caracteres);
$QuantidadeCaracteres--;
$activation_code=NULL;
for($x=1;$x<=32;$x++){
    $Posicao = rand(0,$QuantidadeCaracteres);
    $activation_code .= substr($Caracteres,$Posicao,1);
}
if(empty($f_name)){
    $errors[] = "f name shouldn't be empty";
}

if(empty($l_name)){
    $errors[] = "l name shouldn't be empty";
}

if(empty($email)){
    $errors[] = "email shouldn't be empty";
}

if(empty($gender)){
    $errors[] = "gender shouldn't be empty";
}

```

```

if(empty($gender)){
    $errors[] = "gender shouldn't be empty";
}

if(empty($password)){
    $errors[] = "password shouldn't be empty";
}

if(empty($bday)){
    $errors[] = "birthday shouldn't be empty";
}

```

2) Function sign-in

This is function login for patient only, add patient email and password already exist in database (MYSQL) in first function checks the email if exist in data base or not. Second function checks the password is set and the inputs shouldn't be empty.

```
//login for patient
function login_user(){

    if(isset($_POST['login'])){
        $email = clear($_POST['email']);
        $password = clear($_POST['password']);

        if(empty($email)){
            $errors[] = "email shouldn't be empty";
        }

        if(empty($password)){
            $errors[] = "password shouldn't be empty";
        }
    }

    function logged_in(){
        if(isset($_SESSION['email'])){
            return true;
        }else{
            return false;
        }
    }
}
```

3) Function sign in-role

In this function user (doctor, pharmacist) makes a login with the user name and password already exists in MySQL.

Added from admin, in first function checks the user name if exist in data base or not. Second function checks the first function is set and the inputs shouldn't be empty and the user adds user name and password finally user have a new account in

```
function doctor_admin_role(){  
    if(isset($_POST['login_role'])){  
        $username = clear($_POST['username']);  
        $password = clear($_POST['password']);  
        $errors = [];  
  
        if(empty($username)){  
            $errors[] = "username shouldn't be empty";  
        }  
  
        if(empty($password)){  
            $errors[] = "password shouldn't be empty";  
        }  
  
        if(!empty($errors)){  
            foreach($errors as $err){  
                echo "<small>" . valid_error($err) . "</small>";  
            }  
        }  
    }  
}
```

4) Function profile-patient

This function let the user to update on his profile by editing the address, weight, height, pathological-case, pharmacy-id, and blood group, also can change his profile picture, this changes will be updated successfully if the patient id is correct else it will not updated successfully.

```
if(isset($_POST['update_pp'])){  
    if(isset($_GET['id'])){  
        $id3 = $_GET['id'];  
    }else{  
        $id3 = '';  
    }  
  
    $address = clear($_POST['address']);  
    $mobile = clear($_POST['mobile']);  
    $weight = clear($_POST['weight']);  
    $height = clear($_POST['height']);  
    $bathological_case = clear($_POST['bathological_case']);  
    $blood_group = clear($_POST['blood_group']);  
    $pharmacy_id = $id3;  
    $img_profile = $_FILES['img']['tmp_name'];  
    $img_name = $_FILES['img']['name'];  
    $uploaded_last = "chat" . "_" . $img_name;  
    $target= 'images/imgs/' . $uploaded_last;  
    move_uploaded_file($img_profile, $target);  
    $id_signup = $id3;  
  
    $sql_get_mail = "SELECT * from signup where id = '". $id_signup ."' ";  
}
```

5) Function profile-doctor

This function is used to enter and register the doctor and his personal data, pictures, fees, phone, clinic address, experiments, certificates and dates of detection available weekly with appointments in his own schedule of reservations and update it on his personal page and register it in his database.

```
if(isset($_SESSION['username'])){
    if(isset($_POST['update_dr'])){
        $dr_name = clear($_POST['dr_name']);
        $dr_clinic_address = clear($_POST['dr_clinic_address']);
        $dr_specialization = clear($_POST['dr_specialization']);
        $dr_phone = clear($_POST['phone']);
        $fees = clear($_POST['fees']);
        $dr_degree = clear($_POST['dr_degree']);
        $dr_bio = clear($_POST['bio']);
        $area = clear($_POST['area']);
        $select_day1_name = clear($_POST['select_day1_name']);
        $times_day1 = $_POST['times_day1'];
        $implode_times_day1 = implode(", ", $times_day1);
        $explode_times_day1 = explode(", ", $implode_times_day1);
        $select_day2_name = clear($_POST['select_day2_name']);
        $times_day2 = $_POST['times_day2'];
        $implode_times_day2 = implode(", ", $times_day2);
        $explode_times_day2 = explode(", ", $implode_times_day2);
        $select_day3_name = clear($_POST['select_day3_name']);
        $times_day3 = $_POST['times_day3'];
        $implode_times_day3 = implode(", ", $times_day3);
        $explode_times_day3 = explode(", ", $implode_times_day3);
        $img_profile = $_FILES['img']['tmp_name'];
        $img_name = $_FILES['img']['name'];
        $uploaded_last = "chat" . "_" . $img_name;
        $target= 'images/imgs/' . $uploaded_last;
        move_uploaded_file($img_profile, $target);
    }
}
```

```

$sql2 = "UPDATE `doctor` set `dr_name` = '".$dr_name."',
`dr_clinic_address` = '".$dr_clinic_address."' ";
$sql2 .= ", `dr_specialization` = '".$dr_specialization."', `dr_degree` = '".$dr_degree."',
`phone` = '".$dr_phone."', ";
$sql2 .= " `fees` = '".$fees."', `bio` = '".$dr_bio."',
`img` = '".$target."', `area` = '".$area."', `day_1` = '".$select_day1_name."', `day_2` = '".$select_day2_name."',
`day_3` = '".$select_day3_name."', `times1_day1` = '".$explode_times_day1[0]."', `times2_day1` = '".$explode_times_day1[1]."',
`times3_day1` = '".$explode_times_day1[2]."', `times1_day2` = '".$explode_times_day2[0]."', `times2_day2` = '".$explode_times_day2[1]."',
`times3_day2` = '".$explode_times_day2[2]."', `times1_day3` = '".$explode_times_day3[0]."', `times2_day3` = '".$explode_times_day3[1]."',
`times3_day3` = '".$explode_times_day3[2]."' where `id` = '".$dr_id."' ";

$result2 = query($sql2);

if($result2){
    valid_success("<p style='>Doctor Profile Updated Successfully!</p>");
} else{
    valid_error("Doctor Profile not updated!");
}

```

6) Function booking

This function is the first step for patient to book a doctor that choose the specialty of the doctor from a list contains all the specialization.

```

function booking_dr_patients(){
    if(isset($_GET['id']) || isset($_GET['date']) || isset($_GET['day']) || isset($_GET['spec'])){
        $id_bok = clear($_GET['id']) . "<br>";
        $date_bok = clear($_GET['date']) . "<br>";
        $day_bok = clear($_GET['day']) . "<br>";

    }else{
        $id_bok = '';
        $date_bok = '';
        $day_bok = '';
    }

    $sql_query_bok = "SELECT * from doctor where id= '". $id_bok."'";
    $query_bok = query($sql_query_bok);
    while($rows = fetching($query_bok)){
        global $dr_spec;

        $dr_spec = $rows['dr_specialization'];

        echo $dr_spec;
    }
}

```

After choosing specialization we get a list of doctors from database then choosing the suitable day and time from doctor's working table then save this changes in schedule table booking in his database.

```

function fetch_drs(){

if(isset($_POST['search_dr'])){
    $sspecialty = clear($_POST['sspeciality']);
    $sql_results = "select * from doctor where dr_specialization = '". $sspecialty."'";
}

$result_drs = query($sql_results);
while($rows_drs = fetching($result_drs)){
    $dr_name_result = $rows_drs['dr_name'];
    $dr_spec_result = $rows_drs['dr_specialization'];
    $dr_addr_result = $rows_drs['dr_clinic_address'];
    $dr_fees_result = $rows_drs['fees'];
    $dr_day_1 = $rows_drs['day_1'];
    $dr_day_2 = $rows_drs['day_2'];
    $dr_day_3 = $rows_drs['day_3'];
    $dr_phone = $rows_drs['phone'];
    $dr_id_spec = $rows_drs['id'];
    $dr_img = $rows_drs['img'];
}

```

7) Function payment method

The method of payment is from the Visa or Master Card. The user enters the name of the card, the card number, the payment date and the value of the fees dr and saves this data to the site's database in the payment method.

```
if(isset($_POST['payment_method'])){  
  
    $Caracteres = 'abcdefghijklmnopqrstuvwxyz0123456789';  
    $QuantidadeCaracteres = strlen($Caracteres);  
    $QuantidadeCaracteres--;  
    $activation_code=NULL;  
    for($x=1;$x<=20;$x++){  
        $Posicao = rand(0,$QuantidadeCaracteres);  
        $activation_code .= substr($Caracteres,$Posicao,1);  
    }  
  
    $invoice_number = $activation_code;  
    $p_id = $fetch_pt_id;  
    $dr_id_payment = $dr_id;  
    $fees_dr_payment = isset($_POST['fees']);  
  
  
    $sql_insert_paytm = "INSERT INTO payment_method (invoice_number, fees_dr) ";  
    $sql_insert_paytm .= " VALUES('".$invoice_number."', '".$fees_dr."' )";  
    $query_insert_paytm = query($sql_insert_paytm);  
  
  
    $sql_get_invoice_no = "SELECT * from payment_method where invoice_number = '".$invoice_number."' ";  
    $query_get_incoive_no = query($sql_get_invoice_no);  
    $fetching_get_invoice_no = fetching($query_get_incoive_no);  
  
    $get_invoice_number = $fetching_get_invoice_no['invoice_number'];  
}
```

8) Function Confirm booking

This function is used to confirm the booking after choosing the doctor with the needed specialization with the suitable day and time then patient choosing the way to pay and finally can go to chat with the doctor in the booked time.

```
if(isset($_GET['id'])){
    $sql_insertion_dr_pt = "INSERT INTO schedual (sch_date, sch_day, dr_id, p_id, sch_time) ";
    $sql_insertion_dr_pt .= "VALUES('".$dr_sch_date."', '".$dr_sch_day."', '".$dr_id."',
    '".$patient_id."', '".$time_booking."') ";
    $result = query($sql_insertion_dr_pt);

    if($result){
        valid_success("Patient Has been Booking Successfully!");

    }else{
        valid_error("Patient Not been Booking Successfully!");
    }
}
```

9) Function chat

Function of chat box is the way to connect doctor with patient that is when patient start to explain his case to the doctor in the chat be send and receive messages to and from doctor and also can send images for more explanation for his case.

```
<?php

if(isset($_POST['method']) === true && empty($_POST['method']) === false){

    $method = trim($_POST['method']);
    if($method === 'fetch'){
        fetchMessages();
    }
}
?>
<?php

function fetchMessages(){

    $connection2 = mysqli_connect("localhost", "root", "", "medical_tec");
    $sql_select_chats = "SELECT chat.messages, chat.message_at, chat.img_sending,
    users_chat.username, users_chat.user_id , users_chat.type_user
    from chat JOIN users_chat ON chat.user_id = users_chat.user_id
    ORDER BY chat.message_at DESC";
    $query_select_chats = mysqli_query($connection2, $sql_select_chats);

        while($rows_chats = mysqli_fetch_assoc($query_select_chats)){
            $messages_chat = $rows_chats['messages'];
            $messages_chat_at = $rows_chats['message_at'];
            $messages_chat_img_sending = $rows_chats['img_sending'];
            $messages_username = $rows_chats['username'];
            $type_user = $rows_chats['type_user'];
        }
}
```

Count messages function is to count the all messages sent and received from patient to doctor in the chat box that it happened in the same room.

```
function countMessages(){

    if(isset($_GET['room'])){
        global $room_id;
        | $room_id = $_GET['room'];

    }else{
        | $room_id = '';
    }

$connection4 = mysqli_connect("localhost", "root", "", "medical_tec");

$sql_count_msgs = "SELECT COUNT(*) from chat where room = '".$room_id."'";
$query_count_msgs = mysqli_query($connection4, $sql_count_msgs);
$fetching_count_msgs = mysqli_fetch_array($query_count_msgs);
```

10) Function write report

Using this function helps by logging in to both the patient and the doctor and taking their ID and email patient and username doctor from the database. After the chat is complete, the doctor writes a description of the patient's condition and the appropriate treatment for his condition. The report is recorded according to the date of the day and the hour of examination, and is stored in the database in the patient's medical record.

```

function medical_record(){

    $email_mr = $_SESSION['email'];
    $username_mr = $_SESSION['username'];

if(isset($_POST['confirm_mr'])){
    $description = clear($_POST['description']);
    $medicines = clear($_POST['medicines']);
    $doexam = date("y-m-d h:m:s");
    $timestamp = time() + date("Z");
    $last_doexam = gmdate("Y/m/d H:i:s", $timestamp);
    $sql_mr = "INSERT INTO medical_record(`description`, `medicines`, `p_id`, `dr_id`, `date_of_exam` ) ";
    $sql_mr .= " VALUES('".$description."', '".$medicines."', '".$id_fetched_pt."', '".$id_fetched_dr."', '".$last_doexam."')";

    $result_mr = query($sql_mr);
    if($result_mr){
        valid_success('Medical record for patient has been inserted Successfully.');
    }else{
        valid_error('Medical record for patient has not inserted Successfully.');
    }
}
}

```

11) Function report

This method is used to summon the report from the database from the patient's medical record and display it on the report page that contains the patient's data by name, age and medical condition, and from the name of the doctor who follows him, his specialty, his number, the status and treatment report, and the date and time of

the examination to help the patient follow his condition, and on the one hand Others, help doctors know patient conditions from their medical records.

```
if(isset($_GET['p_id']) && isset($_GET['dr_id'])){
    $p_id = $_GET['p_id'];
    $dr_id = $_GET['dr_id'];

}else{
    $p_id = '';
    $dr_id = '';
}

$sql_display_p_report = "SELECT f_name, l_name, address, mobile, gender, dob, doctor.dr_name, dr_specialization, date_of_exam,
description, medicines from profile_patients
INNER JOIN medical_record ON profile_patients.id = medical_record.p_id
INNER JOIN doctor ON medical_record.dr_id = doctor.id
INNER JOIN signup ON profile_patients.id_signup = signup.id where profile_patients.id = '".$p_id."' AND doctor.id = '".$dr_id."' ";

$display_report = query($sql_display_p_report);
```

12) Function medical record

This query invokes all the data for both the patient and the doctor after the completion of the chat and his book the patient's report by calling the data of the doctor who revealed (doctor name and specialization) and the date of the examination and the patient's data (name, mobile, gender, dob, email) and his report and recording in his medical record.

```
$sql_query_med_rec = "SELECT f_name, l_name, mobile, signup.email, gender, dob, dr_name, dr_specialization, date_of_exam from profile_patients
INNER JOIN medical_record ON profile_patients.id = medical_record.p_id
INNER JOIN doctor ON medical_record.dr_id = doctor.id
INNER JOIN signup ON profile_patients.id_signup = signup.id where medical_record.p_id = '".$something_id."'";
$result_q_med_rec = query($sql_query_med_rec);
while($rows_q_med_rec = fetching($result_q_med_rec)){
    $f_name = $rows_q_med_rec['f_name'];
    $l_name = $rows_q_med_rec['l_name'];
    $email_rows = $rows_q_med_rec['email'];
    $gender_rows = $rows_q_med_rec['gender'];
    // $dob_rows = $rows_q_med_rec['dob'];
    $dr_name_rows = $rows_q_med_rec['dr_name'];
    $dr_specialization_rows = $rows_q_med_rec['dr_specialization'];
    $date_of_exam_rows = $rows_q_med_rec['date_of_exam'];
    $mobile_rows = $rows_q_med_rec['mobile'];
    $dob_rows = strtotime($rows_q_med_rec['dob']);
    // Current date and time
    $something_date = date("Y", $dob_rows);

    $last_dob = date("Y") - $something_date;
}
```

13) Function sign-in for pharmacist

This is function took about sign in for pharmacist, the pharmacist writes his username and password then checks the code is valid or expired. The code works one time at most then it becomes expire

```
function login_pharmacian(){

    if(isset($_POST['login_pharm'])){
        $username = clear($_POST['username']);
        $password = clear($_POST['password']);

        if(empty($username)){
            $errors[] = "username shouldn't be empty";
        }

        if(empty($password)){
            $errors[] = "password shouldn't be empty";
        }

        if(!empty($errors)){
            foreach($errors as $err){
                echo "<small>" . valid_error($err) . "</small>";
            }
        }
    }
}
```

14) M
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nfirm promo code

Firstly any patient get a promo code form random pharmacies if the patient go to this pharmacy, the pharmacist check the promo code and random id if accesses output the code prove" "

If field or error code output "code expired", the code can be used only once and then it will be expired.

```
function check_coupon(){
    if(isset($_POST['confirm_c'])){
        $random_id = clear($_POST['random_id']);
        $coupon = clear($_POST['coupon']);

        $sql = "SELECT * from pharmacy where random_id = '".$random_id."' AND coupon = '".$coupon."'";
        $result = query($sql);
        while($rows = fetching($result)){
            $id_pharm = $rows['id'];
            $rand_id = $rows['random_id'];
            $coupon_id = $rows['coupon'];
            $code = $rows['code_status'];
            $pharmacy_name = $rows['pharmacy_name'];

            if($random_id === $rand_id && $coupon === $coupon_id && $code === "Approved"){
                valid_success("Approved ~> $pharmacy_name");
                $sql2 = "UPDATE pharmacy SET `code_status` = 'Expired' where id = '".$id_pharm."'";
                query($sql2);
            }else{
                valid_error("Expired ~> $pharmacy_name");
            }
        }
    }
}
```

Activate !
Go to Setting

15) Function rating

This function used to rate the chatting that happened between the doctor and patient ,a floating box of 5 stars for rating appeared to the patient after the chat was end then select his rate(from 1 to 5 stars) from this box and then it is saved in the database, finally doctor can see this rate on his profile.

```
if(isset($_POST['send_rate'])){

$something = "<script>

function myFunction1(){

var x = document.querySelector('#star1');
var something = x.getAttribute('aria-pressed');
if (something == 'true')
{
    |    alert(1);
}

}
```

16) Function testimonial

Using this function helps to summon the comments of the patient or user who commented on the evaluation page from the database and show these comments with the name and photo of the user or patient in the list of feedbacks on the doctor page for the doctor to read.

```

function testimonial(){
    if(isset($_GET['id'])){
        $id = $_GET['id'];
    }else{
        $id = '';
    }
    $sql_rating = "SELECT img_p, f_name, l_name, rating, comments from rates
                    INNER JOIN signup On signup.id = rates.id_signup
                    INNER JOIN doctor On doctor.id = rates.id_doctor where doctor.id = '".$id."'";
    $result3 = query($sql_rating);
}

```

17) Function dynamic page

By identifying the source, Admin Panel will add a new user (doctor or patient or pharmacist), delete (doctor), amend or search for the data of the doctors who were contracted on our site when any system malfunction occurred.

```

function dynamic_page(){
    if(isset($_GET['source'])){
        $source = $_GET['source'];
    }else{
        $source = '';
    }

    switch($source){
        case 'add_doctor':
            include('add_doctor.php');
            break;
        case 'add_patients':
            include('add_patients.php');
            break;
        case 'search_doctor':
            include('search_doctor.php');
            break;
        case 'edit_doctor':
            include('edit_doctor.php');
            break;
        case 'delete_doctor':
            include('delete_doctor.php');
            break;
        default:
            // include('admin.php');
            include('view_all.php');
    }
}

```

18) Admin add user

This function is the admin panel to add a new user and determine whether he is a doctor, patient or pharmacist through a specific role and to verify that there is no user with the same username, he will add a new user and register in his database.

```
function admin_add_user(){

    if(isset($_POST['add_new_dr'])){
        $username = clear($_POST['dr_username']);
        $password = clear(md5($_POST['dr_password']));
        $role = clear($_POST['role_name']);

        if(empty($username)){
            $errors[] = "username shouldn't be empty";
        }

        if(empty($password)){
            $errors[] = "password shouldn't be empty";
        }

        if(empty($role)){
            $errors[] = "role shouldn't be empty";
        }

        $sql_check_user = "SELECT id, username from signin where username = '".$username."'";
        $result = query($sql_check_user);

        if(num_rows($result) >= 1){
            $errors[] = "Username Already Exist";
        }
    }

    $sql = "INSERT INTO signin (username, password, role) VALUES('".$username."', '".$password."', '".$role."') ";
    $result = query($sql);
    $sql_fetch_id = "SELECT * from signin where username = '".$username."' ";

    $result3 = query($sql_fetch_id);

    if($result){

        $sql_create_doctor = "INSERT INTO doctor(id, signin_id) values('".$id_something_db."', '".$id_something_db."') ";
        query($sql_create_doctor);
        valid_success("User Added Successfully!");
    }else{
        valid_error("User Not Added Successfully!");
    }
}
```

19) Function search doctor

This function helps us to search for a doctor's name through the page admin panel by easily recalling this person's data from his own database.

```
function search_doctor(){
    if(isset($_POST['search_doctor'])){
        $dr_name = clear($_POST['dr_name']);

        $sql = "SELECT * from doctor where dr_name LIKE '%".$dr_name."%' ";

        $result = query($sql);
```

20) Function delete doctor

The admin panel deletes the doctor's account by recalling his id from his database when any malfunction or any problem occurs.

```
function delete_doctor(){

    if(isset($_GET['id'])){
        $id_delete = $_GET['id'];

    }else{
        $id_delete = '';
    }

    $sql_doctor_fetch = "SELECT * from doctor where id = '".$id_delete."'";
    $result_dr = query($sql_doctor_fetch);
    $dr_name_fetched = fetching($result_dr);

    $sql_delete_doctor = "DELETE FROM `doctor` WHERE id = '".$id_delete."'";
    $result_delete = query($sql_delete_doctor);
```

21) Function update doctor

Through this function, the admin panel will edit and update the new data for the doctor's account (name, specialization, clinic address degree, phone, fees, bio, image, his schedule working) and save it with the database of the doctor's account.

```
function update_doctor(){
    $errors = [];
    if(isset($_GET['id'])){
        $ids = $_GET['id'];
    }else{
        $ids = '';
    }
    if(isset($_POST['update_doctor'])){
        $dr_name = clear($_POST['dr_name']);
        $dr_specialization = clear($_POST['dr_specialization']);
        $dr_clinic_address = clear($_POST['dr_clinic_address']);
        $dr_degree = clear($_POST['dr_degree']);
        $phone = clear($_POST['phone']);
        $fees = clear($_POST['fees']);
        $bio = clear($_POST['bio']);

        $img_profile = $_FILES['img']['tmp_name'];
        $img_name = $_FILES['img']['name'];
        $uploaded_last = $dr_name . " " . $img_name;
        $target= 'images/imgs/' . $uploaded_last;
        move_uploaded_file($img_profile, $target);

        $area = clear($_POST['area']);
        $day_1 = clear($_POST['day_1']);
        $day_2 = clear($_POST['day_2']);
        $day_3 = clear($_POST['day_3']);
    }

    $sql_update_doctor = "UPDATE doctor SET dr_name = '".$dr_name."', dr_clinic_address = '".$dr_clinic_address."'
    ,dr_specialization = '".$dr_specialization."', dr_degree = '".$dr_degree."', phone = '".$phone."', fees = '".$fees."'
    , bio = '".$bio."', img = '".$target."', area = '".$area."', day_1 = '".$day_1."', day_2 = '".$day_2."', day_3 = '".$day_3."' WHERE id = '".$ids."'";
}

$result_updated_doctor = query($sql_update_doctor);

if($result_updated_doctor){
    valid_success("Doctor Updated Successfully!");
} else{
    valid_error("Doctor Not Updated Successfully!");
}
}
```