



Clinic management project

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Project Idea:

The Remote clinic system is software developed to simplify the communication process between the doctor and patients. IT is very useful for patients, because they can use you anywhere and anytime. Doctors can easily diagnose and deliver medication. It is important in the current situation.

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Abstract:

The world has become generally dependent on technology in their daily lives, and with modern times the medical sector is under increasing pressure to provide medical care on time and with high quality. With the spread of the new Corona virus, remote communication by means of technology has become indispensable. The purpose of this program is to provide natural care remotely by means of an electronic clinic in which the patient's symptoms are placed and diagnosed by the doctors.

Keywords:

Project management, project control, system.

Introduction:

This project will solve the problem of remote communication.

The clinic management system is based on SQL database and JAVA programming language.

The scope of this project includes the regular scheduling of patients and physician's data and presenting that data in an orderly fashion to the responsible (administration) of that clinic.

The benefit of this project is that the information paper (doctor - patient - treatment) will be replaced by digital information that is stored in the computer, where it is easier and more secure in accessing it, as the old system may cause data loss or errors in monitoring the information.

Project Management Member:

1-patient:

The patient can enter data such as recording a new statement by entering his personal data and the symptoms he feels based on which the doctor is diagnosed.

He can also inquire about the consultation that includes the next consultation date (if the doctor is supposed to examine it himself), diagnosis and treatment. He also has some options such as amending his personal data or canceling the registration (in the case if he is on a waiting list).

2-Doctor:

The patients registered with him are shown in a table where their personal information and symptoms they feel are shown and thus he can add a diagnosis and add a treatment to it.

He also has more options such as (the ability to search for the patient using his personal information - amendment to the consultation).

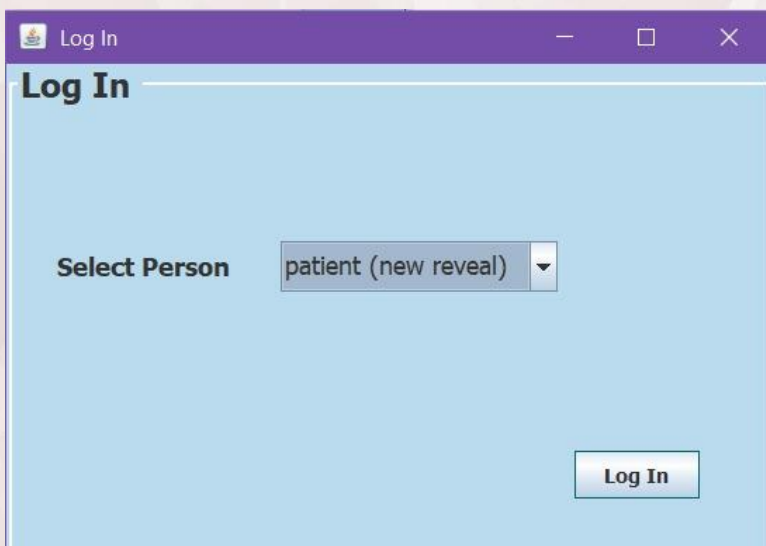
3-Administration:

He can do research on each patient, doctor, and treatment, each with his available information.

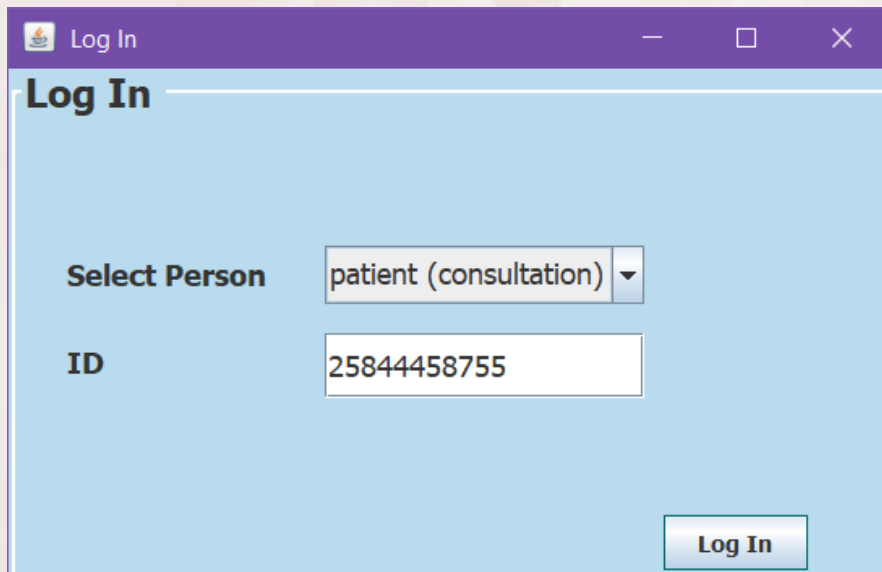
He can also add a new treatment or doctor to the clinic and supervise them, modify a doctor or treatment registered in the clinic, scan a doctor, or treat.

System Design:

Figure1: login page.



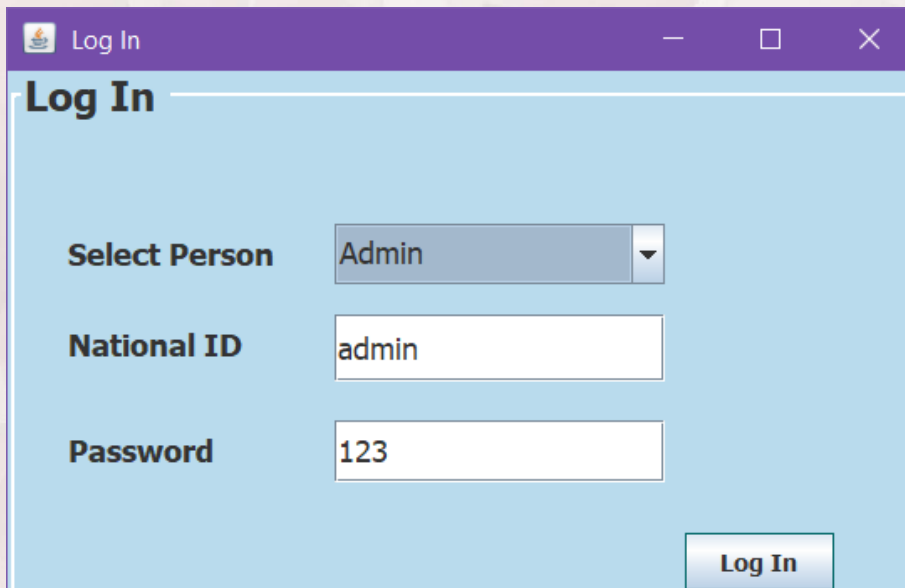
- 1) Registration page if he is a new patient.
(Just press the record button, and the new recording slap will open automatically)



A screenshot of a web application window titled "Log In". The window has a purple header bar with a small icon and the text "Log In". Below the header, the main content area is light blue. It contains a "Select Person" dropdown menu with "patient (consultation)" selected, an "ID" text input field containing "25844458755", and a "Log In" button at the bottom right.

- 2) Here, the patient's consultation is recorded by entering the national number, which in turn will be searched in the database if it is registered or not. (after that the consultation page appears with all the personal information, diagnosis, and treatment)

* Note: If a doctor has not entered a diagnosis, he will inform him that he is on the waiting list.



A screenshot of a web application window titled "Log In". The window has a purple header bar with a small icon and the text "Log In". Below the header, the main content area is light blue. It contains a "Select Person" dropdown menu with "Admin" selected, a "National ID" text input field containing "admin", a "Password" text input field containing "123", and a "Log In" button at the bottom right.

- 3) Here, you will be logged in as an administration member, here the basic entrance for both the name and the password are (admin), (123)

Log In

Select Person: Doctor

National ID: 123

Password: 123

Log In

- 4) Then if he is a doctor, he must enter his national number and password (123). If this doctor is registered in this clinic, he will be transferred to the doctor's slap, but if he is not registered he will inform him that he is not available

Figure 2: New Reveal:

New Reveal (Patient)

Patient Information

Name:

Phone:

E-mail:

Address:

Age:

National ID:

Symptoms :

Select Doctor:

- Abdullah Hisham
- Ahmed Kareem
- Adham Ali

- 5) On the new patient registration page, the patient enters his personal information and the symptoms he feels, in addition to that he chooses which of the doctors he would like to treat with
- * If you forget to enter any of the existing data, a message will appear to him that the data has not been completely entered *

figure 3: The patient consulted:

Patient Information:

Name: heba

Phone: 01028564789

E-mail: heba34@gmail.com

Address: benha

Age: 45

National id: 25844458755

Symptoms

headache

Dr/ ...

Date of Consultation

Information about illness

Treatment Plan:

Treatment:

Cost: 0

*In the case if it is on the waiting list

delete update exit Ok

- 6) Here is the patient consultation page, where he displays all his personal information, and if he is free to amend his information.

If he has completed the waiting period and has been diagnosed and treated by the doctor, it will also appear in the information on the page.

He also has the freedom to delete the registration, but only if it is on the waiting list. If not, then this option is not authorized for him.

Figure 4: Doctor page:

Doctor Page

ID	Name	Phone	E-mail	Address	Age	National_id	Symptom
1	heba	0102856...	heba34@...	benha	45	25844458...	headache
2	mariam	0105486...	mariam@...	cairo	20	20457826...	Nausea an...
3	hager	0105486...	hager@g...	Alex	16	65827954...	Fainting

Symptoms:

Search Name

Enter data which you entered in search

Date of consultation

Info about illness

Treatment Plan:

antibiotic

antibiotic

anti inflammatory

7) Doctor's page

A table appears in which the doctor's patients are automatic, while the page starts where all the patient's information is available and while choosing one of these patients the symptoms appear in a special section to clarify the symptoms more for the doctor and also if this patient had a record of him before that diagnosis and treatment, then they also appear in the consultation section.

Another option available to the doctor is that he can perform a search for a patient by using the recorded information and then when the information appears in the table.

There are two options for diagnosing a doctor, and they are as follows:

Add diagnosis and treatment for the first time (new patient)

Or modify the diagnosis, and this is if he is a patient who has been previously diagnosed.

Figure 5: Admin:

Admin Reports

Select : Doctor

Search : Age

Enter data which you entered in search

35

search

ID	Name	Address	Phone	Email	Age	Specially	Studying	Salary	National_id
2	Ahmed K...	Egypt, C...	0105486...	Ahmed@...	35	cardiologi...	Cairo Uni...	2000	456

Add Update Delete Exit

8) Admin Page:

He can search for each of the following (doctor - patient - treatment) each of them with his available information and according to the entry information appears in the table assigned to him (* for example in this form the search for a doctor appears with his knowledge of his age, so the doctor appears that corresponds to the age entered)

It has many options:

1- Adding a new doctor or a new treatment to the clinic, either adding a new patient, this is not authorized (* and that is based on the selection of the chosen member to add him)

2- A doctor or treatment is modified (that is based on his choice of a doctor or a specific treatment from the schedule)

As for modifying a patient, that is also not authorized for him.

3- A doctor or treatment examiner (also that with water, to choose an element from the table)

* Patient scan is not activated.

Figure 6: Admin process:

The screenshot shows a web application window titled "New Doctor". The main heading is "Add New Doctor". The form is divided into two main sections. The left section contains seven input fields stacked vertically, each with a label to its left: "Name", "Address", "Phone", "E-mail", "National id", "Age", and "salary". The right section contains two input fields: a large one labeled "Specially" and a smaller one labeled "Studying". At the bottom of the form, there are three buttons: "Exit" (red text), "Back" (red text), and "Submit" (blue text).

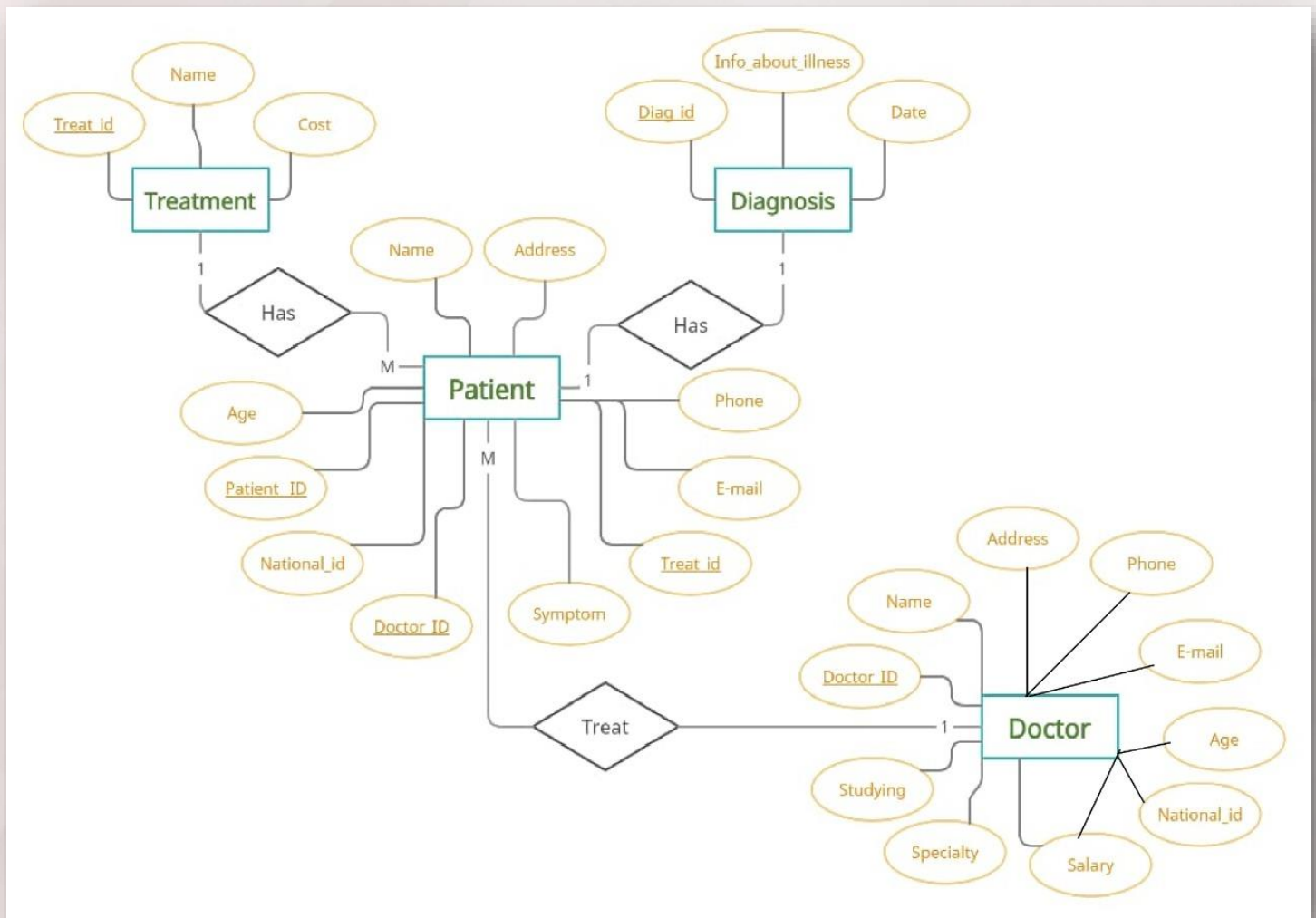
9) This page will appear if you choose to add a new doctor or update.

The screenshot shows a web application window titled "New Doctor or new treatment". The main heading is "Add New Doctor or new treatment". The form is divided into two main sections. The left section contains two input fields stacked vertically, each with a label to its left: "Name" and "Cost". The right section is empty. At the bottom of the form, there are three buttons: "Exit" (red text), "Back" (red text), and "Submit" (blue text).

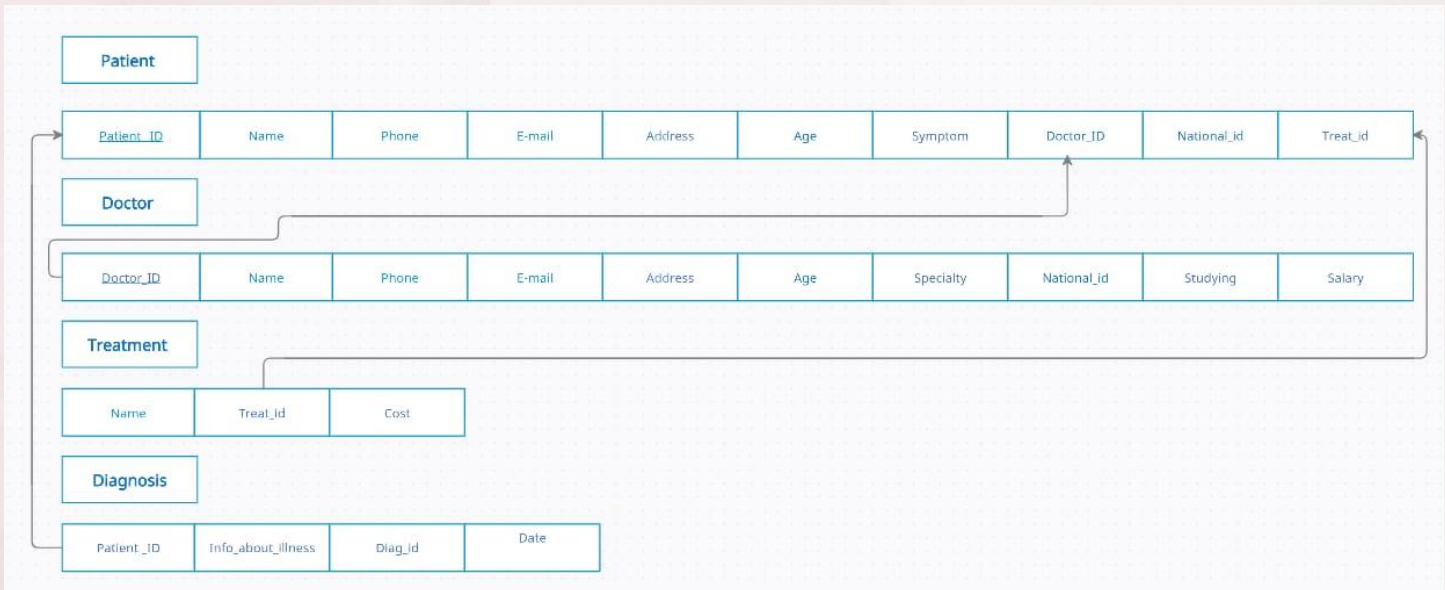
10) And This page will appear if you choose to add a new treatment or update it.

Database:

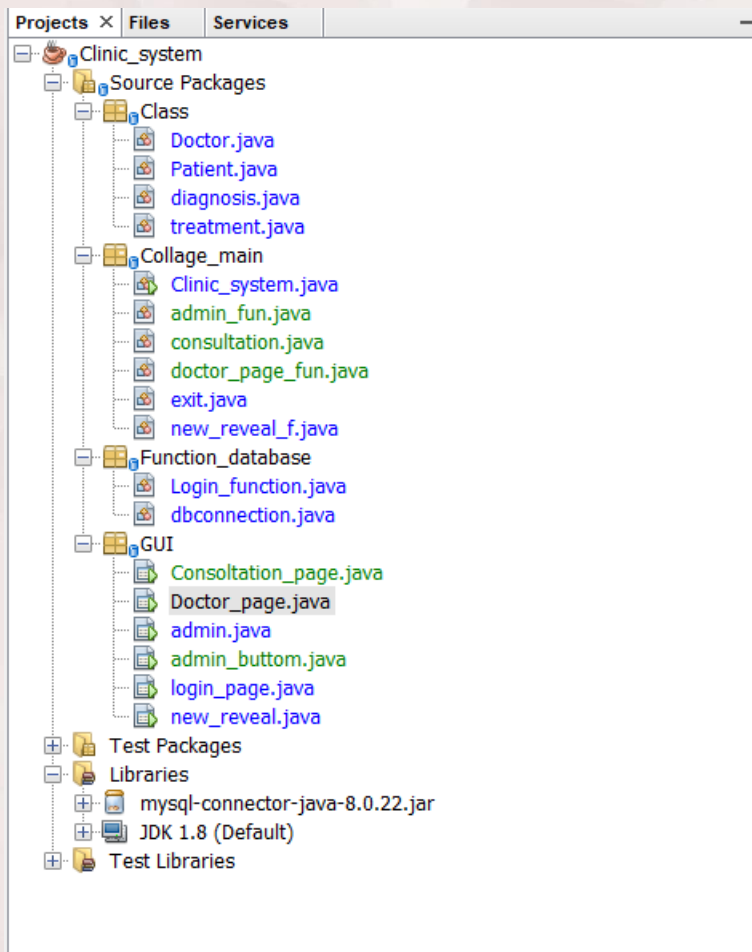
1- EER Diagram:



2- Mapping:



Methods (Code):



Class: This package is for database tables, as it includes the columns related to members' information, whether (doctors - patients - treatment - diagnosis)

Collage_main: This package includes a class for running the program (main) and contains a class that includes functions linking the database and the GUI.

Function_database: This package includes the link class between the database and the (JAVA) program, and it also contains a class for the entry function that tests whether the input is correct or not.

GUI.

SQL code used:

- INSERT INTO

Syntax:

INSERT INTO table_name (column1, column2, column3, ...)
VALUES (value1, value2, value3, ...).

- SELECT

Syntax:

SELECT column1, column2, ...
FROM table_name.

◇ I use this method to search in database:

Ex:

```
String SQL="SELECT `id`, `Name`, `Address`, `Phone`, `E-mail`, `Age`, `Specialty`, `Studying`, `Salary`, `National_ID`  
+ "where " + ColName + " like '%" + keySearch + "%'";
```

In this (ex) I select data from database where item that the user select it
From combo if like the word that the user input.

- ◇ SELECT INNER JOIN

Syntax: SELECT column name ()

FROM table1

INNER JOIN table2

ON table1.column_name = table2.column_name.

EX:

```
("select doctor.name from doctor "  
+ "inner join patient as p"  
+ " on p.doctor_id = doctor.id where p.national_id =" + patient_nid + " ");
```

◇ SELECT COUNT (*)

```
PreparedStatement stm = conn.prepareStatement("select count(*) from clinic.doctor ;");
```

The COUNT () function returns how many rows in SQL table.

- DELETE

Syntax: DELETE FROM table_name WHERE condition;

- UPDATE

Syntax:

UPDATE table_name

SET column1 = value1, column2 = value2, ...

WHERE condition.

- ◇ UPDATE INNER JOIN

Syntax:

UPDATE tablename

INNER JOIN tablename

ON tablename.columnname = tablename.columnname

SET tablename.columnname = tablename.columnname;

```
PreparedStatement stmt = conn.prepareStatement("update diagnosis inner join patient " +
+ "on diagnosis.`patient_id` = patient.`patient_id`\n" +
"set diagnosis.date=?, diagnosis.info_about_illness=?, patient.treat_id = ?\n" +
"where patient.`patient_id`='"+p.patient_id+"'");
```

Conclusion:

Ultimately, the clinic management system is a basic database-based system. It simplifies the work of management and employees by saving them time and effort, thus being able to do their work more efficiently.