

Database Management Systems Course Project Report 2nd Year Computer Engineering

Project Title: National Cancer Institute (NCI)

Group Number: 23

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1- The main purpose of the project

Our idea is not basically a database for a hospital, but it relies mainly on solving the problems of the paper system that the National Cancer Institute (NCI) has adopted so far, by simulating the paper management method in the National Cancer Institute and trying to convert the paper management system in the same manner into a digital management system, based on the database Which we designed according to the method of managing the institute.

Technologies Used

- **Programming Language:** C#
- **Database Management System:** SQL Server (MSS)
- **Design and Modeling Tools:** Entity-Relationship (ER) modeling and relational database schema.

2- Data (Conceptual) Model

Doctors Table: It is a table that contains all the details of doctors who work at the National Cancer Institute.

The details include doctor id, doctor name, birthday, salary, room id, and specialty.

The primary key in this table is the doctor id, which identifies each doctor.

The foreign key in this table is the room id, which identifies the room in which this doctor works.

Doctor Rooms Table: It is a table that contains all the rooms where doctors work.

The details include doctor room id and clinic name.

The primary key in this table is the doctor room id, which identifies each room.

The foreign key in this table is the clinic name, which identifies the clinic to which this room belongs.

Patients Table: It is a table that contains all the details of patients who receive treatment from the National Cancer Institute.

The details include patient id, patient name, patient date, patient age, patient file, doctor id, and clinic name.

The primary key in this table is the patient id, which identifies each patient.

The foreign keys in this table are the doctor id, which identifies the doctor treating this patient, and the clinic name, which identifies the clinic where this patient receives treatment.

Employees Table: It is a table that contains all the details of employees who work at the National Cancer Institute.

The details include employee id, employee name, employee birthday, employee salary, and clinic name.

The primary key in this table is the employee id, which identifies each employee.

The foreign key in this table is the clinic name, which identifies the clinic where this employee works.

Patient Rooms Table: It is a table that contains all the details of the rooms in which patients stay.

The details include patient room id, patient id, and whether the room is empty or not.

The primary key in this table is the patient room id, which identifies each room.

The foreign key in this table is the patient id, which identifies the patient staying in the room.

Clinics Table: It is a table that contains all the details of the clinics in the National Cancer Institute.

The details include the clinic name and the number of rooms in each clinic.

The primary key in this table is the clinic name, which identifies each clinic.

Orders Table: It is a table that contains all the details of the orders placed by patients who come to the National Cancer Institute.

The details include clinic name, patient id, and the time of insertion.

The foreign keys in this table are clinic name, which identifies the clinic to which the patient is assigned, and patient id, which identifies each patient who places an order.

X Rays Table: It is a table that contains all the details of patients who undergo X-ray tests or medical analysis of medicine from the pharmacy.

The details include patient id, date, pharmacy, X-ray, analysis, and time of insertion.

The foreign key in this table is the patient id, which identifies the patients who undergo the X-ray test.

Clinic Employee Table: It is a table that contains all the details of employees who work at a clinic.

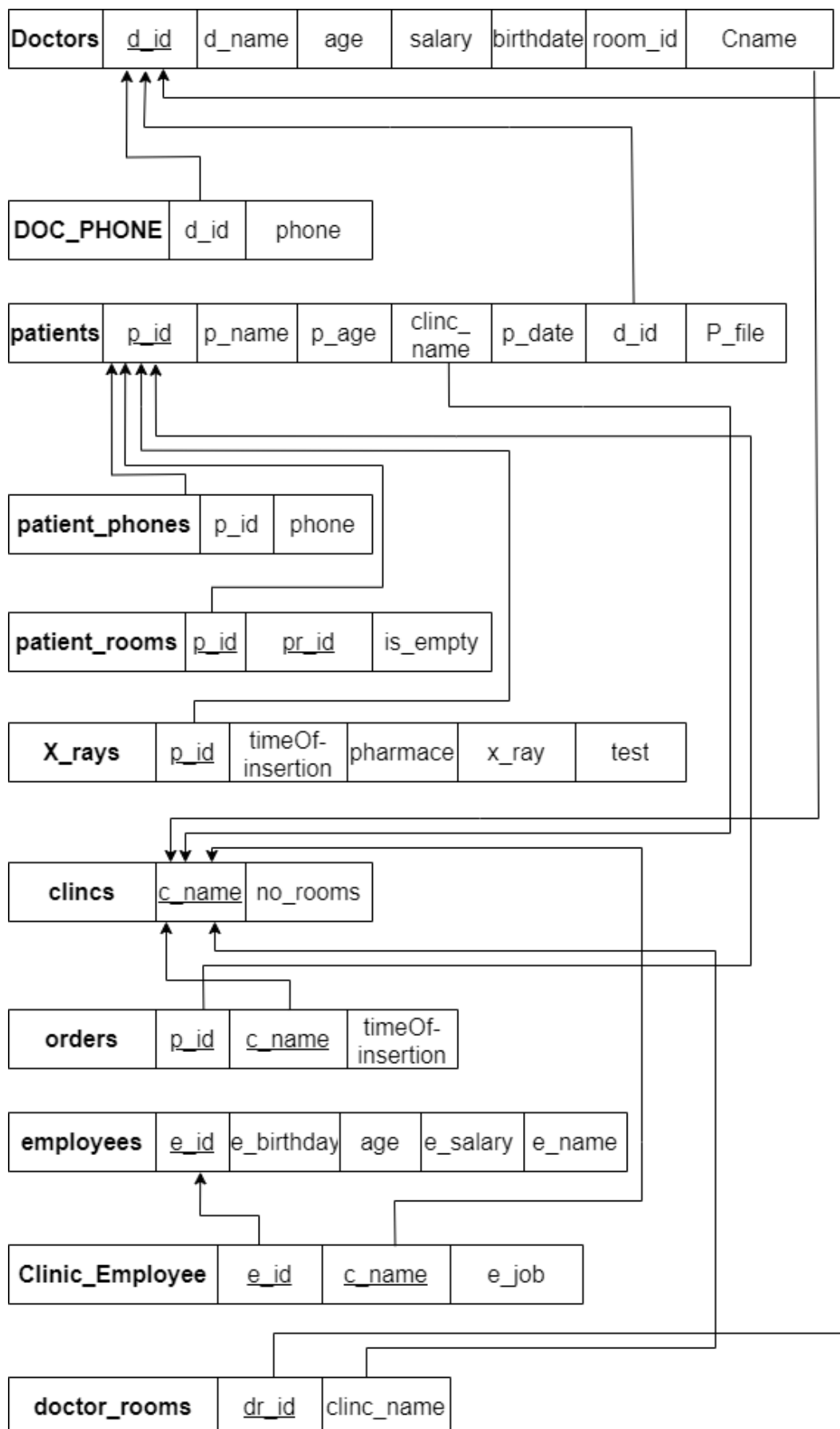
The details include the employee ID, clinic name, and job.

The foreign keys in this table are the employee ID, which identifies each employee, and the clinic name, which identifies the clinic where the employee works.

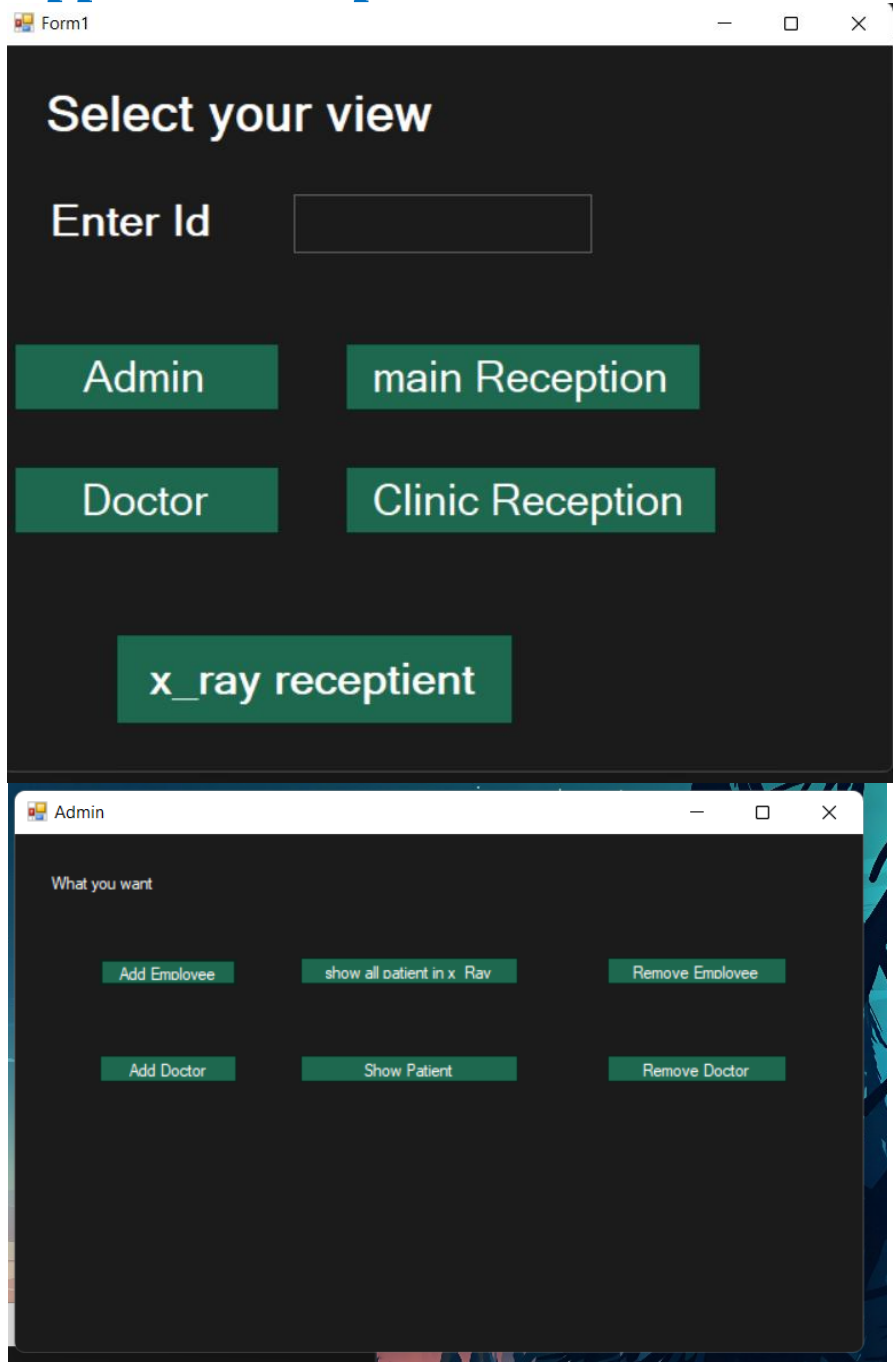
3.1- Entity Relationship (ER) Diagram:



3.2- Relational Model:



4- Application Implementation



The image displays two overlapping application windows. The top window, titled 'Form1', has a dark background and features the text 'Select your view' at the top. Below this, there is a label 'Enter Id' followed by a text input field. Further down, there are five green buttons with white text: 'Admin', 'main Reception', 'Doctor', 'Clinic Reception', and 'x_ray receptient'. The bottom window, titled 'Admin', also has a dark background and contains the text 'What you want' at the top. Below this, there are six green buttons with white text arranged in two rows: 'Add Emolovee', 'show all patient in x Ray', 'Remove Emolovee' in the first row, and 'Add Doctor', 'Show Patient', 'Remove Doctor' in the second row.

Show_xReay_Patient

Enter Patient ID

serach

Show All

AddEmployee

name

jop

Birthday

21 June 2023

salary

Clinic Name

Add

0

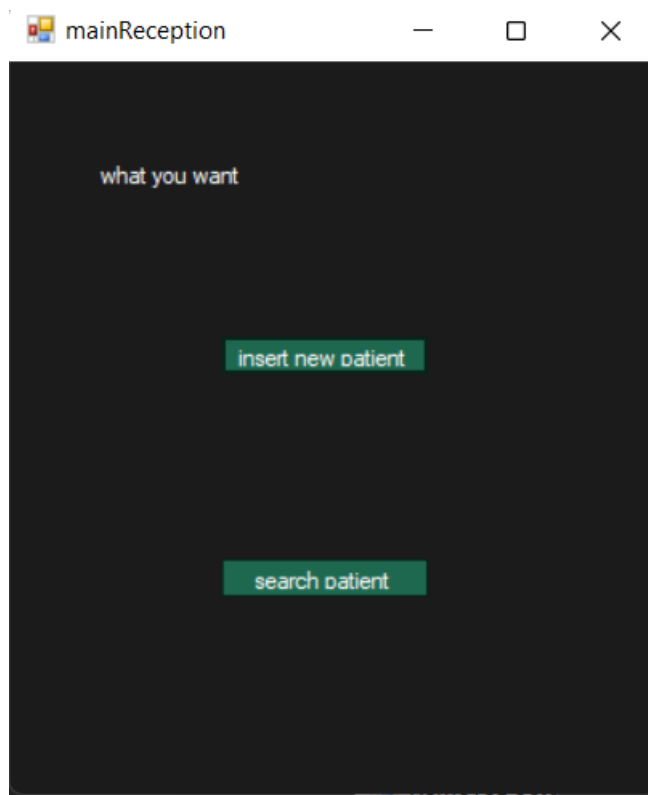
Enter Emplpyee ID

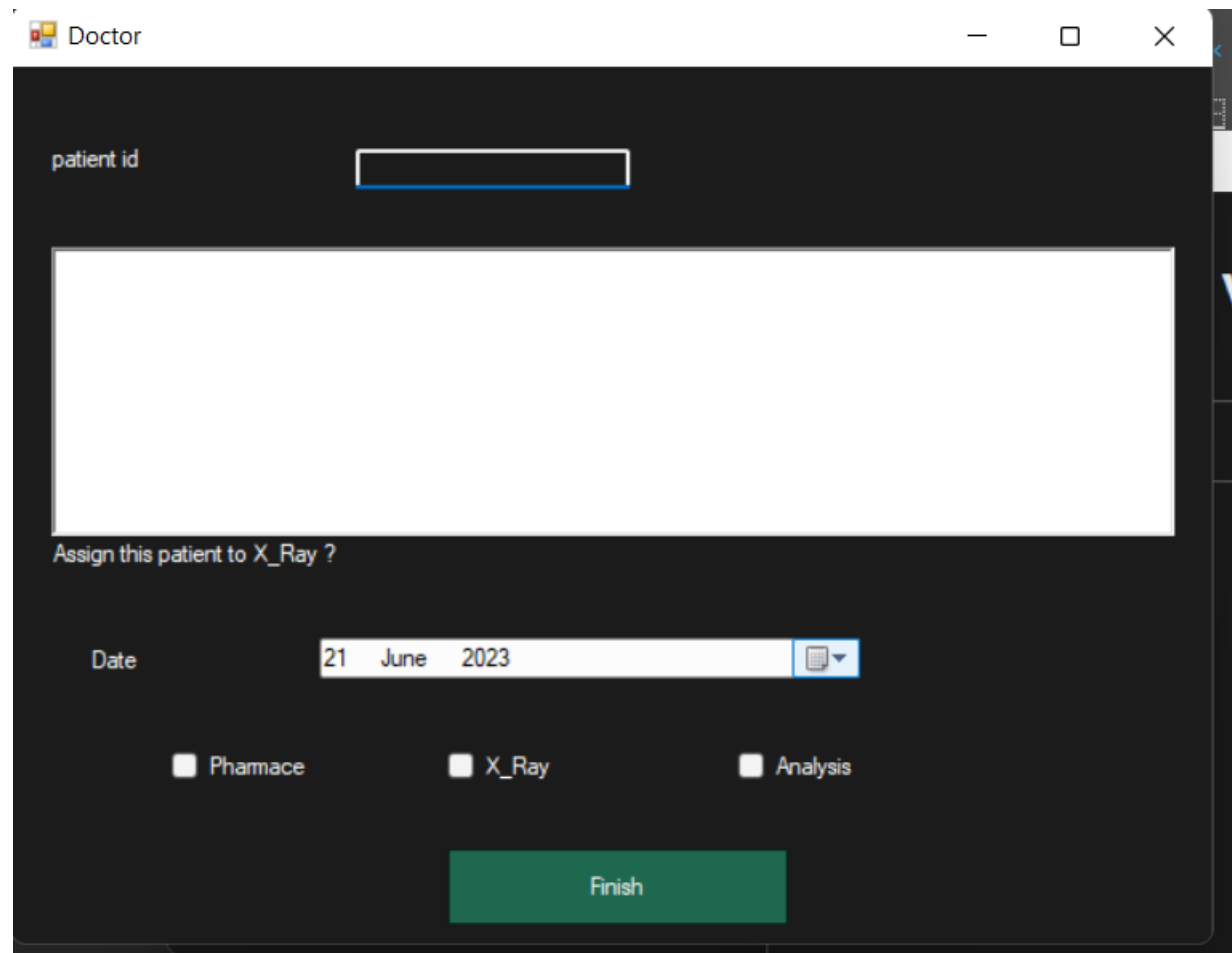
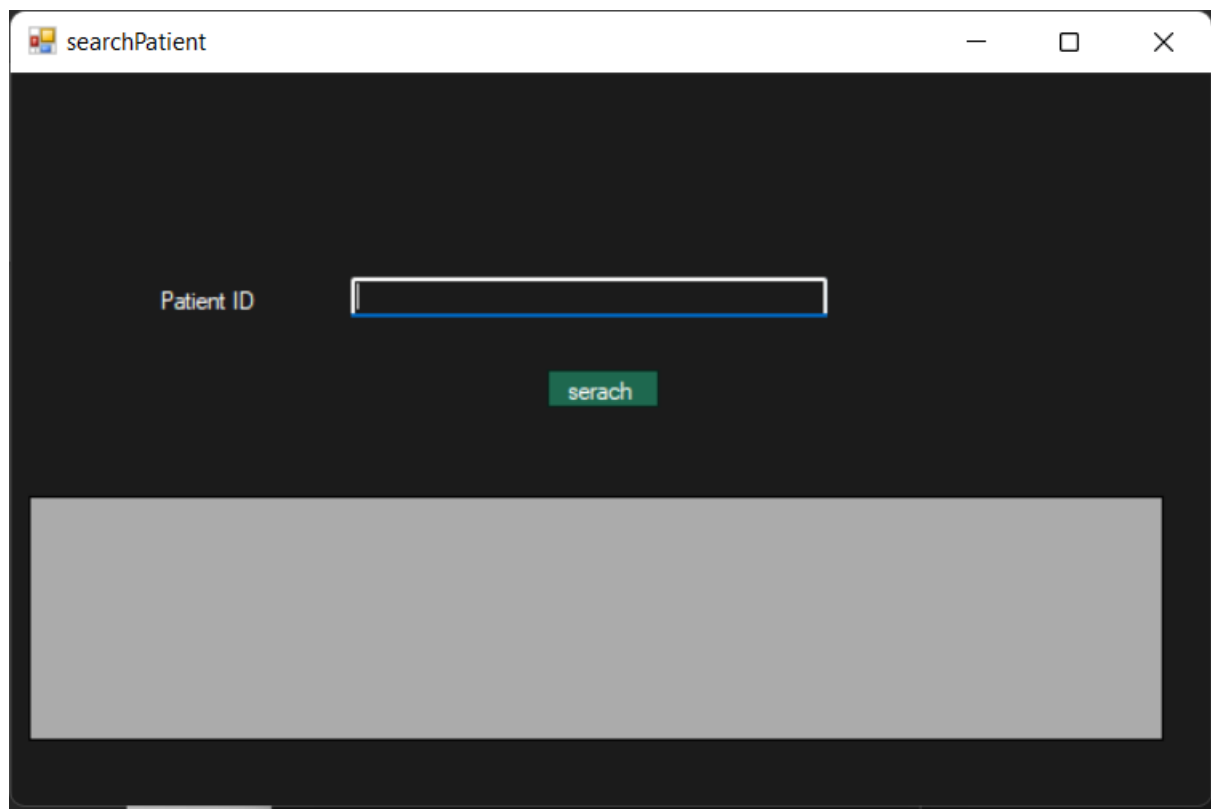
Remove

RemoveDoctore

Enter Doctor ID

Remove

The screenshot shows a window titled 'insertNewPatient'. The background is dark. At the top, the text 'patient informations' is displayed in a light color. Below this, there are five input fields for patient information: 'name', 'age', 'clinic', 'phone', and 'date'. Each field has a corresponding label to its left. The 'date' field is a date picker showing '21 June 2023'. At the bottom of the form, there is a green button with the text 'ADD'.



receptionClinic

clinic name

Add Doctor To Patient

patient ID

show clinin patient Order Patients Assign Patient to Room Add Patient to room remove patient from clinic

Clinic Order is

PatientAtThisDate

Enter Clinic Name

Date

GO

OrderOfClinic

Enter Clinic Name

InsertPatientToDoctor

patient ID

Doctor ID

