

# Information Systems and Data Modeling – IT1090



## Assignment

Title: Online Pharmacy Portal


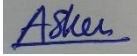
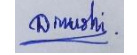

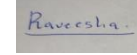
Batch Number: 2.2

Group Number: MLB\_WD\_02.02\_12

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Submitted on: 13/10/2023.

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# 1. Introduction

Our Online Pharmacy Platform stands as a shining example of cutting-edge healthcare solutions in a time when accessibility and convenience are crucial. We are aware of the difficulties people sometimes have getting access to necessary medications, particularly in today's fast-paced society. Our platform provides customers with a simple and secure way to get their medications by uploading prescriptions or meeting our doctor from the convenience of their work since we are dedicated to closing the technological and healthcare gap. There are many more varieties of products and customers can get more information about products. Additionally, customers can use our website to register for customer service, submit suggestions for improvement, and ask questions about our products, dosage, or any other services.

A wide range of technologies have been used in the development of our online pharmacy platform to provide a stable and dynamic system. HTML/CSS, JavaScript, PHP, and MySQL are the variety of technologies used for the development of our platform. HTML/CSS provide structure and style for our platform's customer interface. JavaScript provides interactivity and responsiveness to our platform .PHP seamlessly interacts with MySQL by allowing real time updates interactions with the database. Together, these technologies produce a seamless and secure customer experience.

A website's database is its structural support system, especially one as important as an online pharmacy platform. Its significance is extensive and essential to the platform's usability, security, and overall customer experience. A database allows for the organized and efficient storage of vast amounts of data like details about medications, user profiles, prescriptions, orders. It also manages user roles and login. After purchasing, orders are stored in the database together with itemized lists, quantity information, and delivery information. This data is necessary for processing orders, monitoring their progress, and updating users on deliveries in real-time.

## 2. Hypothetical Scenario

An online pharmacy portal is a pharmacy that operates over the internet and sends orders to customers through mail, shipping companies, or online pharmacy web portal. And imagine a user named Jack who lives in a corrupt city. Jack has been feeling under the weather for a few days. And he suspects he might have a cold. instead of braving the vehicles traffic and huge crowded cities to visit a physical pharmacy, because He decides to use an online pharmacy portal.

First, Jack starts by registering on the online pharmacy portal using his email and creating a private only one password. After logging in, Jack uses the portal as symptom checker feature to input his symptoms, such as a body pain and sore throat. The portal suggests a virtual consultation with a licensed pharmacy owner. Jack schedules an appointment for later in the day. It is a mistake. At the scheduled time, Jack joins a video call and online chat with the pharmacy owner. He symptoms and the pharmacist provide advice on over-the-counter medications. The main pharmacist is recommendations, Jack browses through a wide selection of cold and flu medications, details and selects the one he wants to purchase. If a prescription is required for certain medications, the portal allows Jack to upload it, or he can request an online prescription from the pharmacist during the consultation. And Jack adds the selected medication to his cart, proceeds to checkout and his payment details. The portal offers signal and multiple delivery options, including same day delivery or standing shipping or airline. Jack chooses same day delivery for convenience. And throughout the day, Jack can track his order is progress through the portal and send notifications when it is up for delivery. Then, the delivery arrives at jack's doorstep within the promised time frame, and he sends his medications. And the online pharmacy portal Jack a follow up email or notification a few days later, checking out his health and offering refill and complete reminders for his medication.

This hypothetical scenario shows how can online pharmacy portal system can provide convenience, access to healthcare device, and a range of medication while prioritizing user privacy and security.

## 3. Requirement Analysis

### 3.1. Main Requirements

- Functional Requirements

Functional requirements are the basic functions that our online pharmacy platform should have. They define what the system must do to provide a seamless and user-friendly experience for customers of our platform.

1. Patient and registered user (can access the front end of the system)

User requirements:

Patient

- Ability to view a comprehensive catalog of available medications.
- Capability to search for medications by name, category, dosage, or other relevant criteria.
- Apply filters for the searched items.
- Information on what is required to order prescription medications.
- Ability to add non-prescription medications to a shopping cart for purchase.
- Ability to check the list of selected medications, quantity, and total price.
- Order placement for non-prescription medications.
- Register for an account to access more benefits and additional features.

Registered customer (can access front end of the system)

- Ability to manage a user account with a unique username and a password.
- Upload a prescription and verify it.
- Make an appointment to meet the doctor.
- Registered customers can cancel the appointment.
- Meet the doctor through video conferencing.
- Placed the order.
- View order history.
- Guidance on usage of medications.
- Secure payment methods.
- Order tracking.
- Registered customers can make inquiries and mentioned issues.
- Registered customers can rate the website.

System requirements:

- Display available medications.
- Approve customer registration details and create a user account.
- Display selected medication in the cart and calculate the total price.
- System should validate the login credentials entered by the registered customer.
- System should provide facilitate to upload prescription.
- The system should provide registered customers to make an appointment and cancel the appointment to meet the doctor.
- The system should provide facilities to meet the doctor through video conferencing.
- The system should facilitate to place the order and display order history.
- System should provide secure payment for the customer.
- Facilitate customer to track the order.
- Save modified user account details.

## 2. Pharmacist (can access front end of the system)

### User requirements:

- Pharmacists should have unique logins and verify the authenticity.
- Ability to review uploaded prescription and verify the prescription.
- Ability to communicate with customers for more additional information.
- Pharmacists can access comprehensive information about medications, including indications, dosage instructions, side effects, and precautions.
- Ability to process the order.
- Check availability and levels of medications.
- Ability to update inventory status.
- Access to history of processed order.
- Pharmacists should deliver medications.
- Add or remove suppliers according to your preference.
- Able to restock medications.
- Generating reports.

### System requirements:

- System should validate login credential by the pharmacist.
- Facilitate communication with customers and pharmacists.
- System should facilitate processing the order.
- Store data on availability and levels of medications.
- Facilitate to update inventory status.
- Able to generate reports.
- Store data on suppliers.

### 3. Doctor (can access front end of the system)

#### User requirements:

- Doctor should have unique login credentials for accessing the platform.
- Communicate with patients.
- Issue electronic prescription for medications.
- Viewing patient medical history.
- Communicate with the pharmacist.

#### System requirements:

- System should validate login credential by the doctor.
- Facilitate to communicate with the patient.
- Able to view patient medical history.
- Facilitate to communicate with the pharmacist.



#### 4. Customer Service Representative

##### User requirements:

- Customer service representatives should have unique login credentials for accessing the platform.
- Access to user information.
- Integrated communication channels to contact customers.
- Ability to track communication history.
- Confirm the appointment according to the availability of the doctor.
- Provide user guidance on how to use the platform.
- Feedback collection and reporting.
- Ability to respond quickly and professionally to customer questions, issues, and complaints.

##### System requirements:

- System should validate login credential by the Customer service representative.
- The system should facilitate access to the user information.
- Able to communicate with the customer.
- Provide facility to check the availability of the doctor and confirm the appointment.
- Facilitate collecting feedback and creating reports.

## 5. Supplier (can be access front end of the system)

### User requirements:

- Suppliers should have the ability to register for an account on the platform with unique login credentials.
- Able to inventory management.
- Update order status to give accurate order tracking details to customers.
- Communicate with pharmacist.
- Provide facility of invoicing and payment processing.
- Return and refund management.
- Suppliers should have the ability to handle special orders.

### System requirements:

- System should validate login credential by the supplier.
- Facilitate supplier to inventory management.
- System should facilitate communication with the pharmacist.
- Keep details on orders and able to return and refund management.

## ❖ Nonfunctional requirements

### ❖ Performance

- Respond to user interactions within an acceptable time frame.
- Platform should support a concurrent users and transactions.
- The system must be scalable to handle more users without having a substantial performance hit.

### ❖ Availability

- The platform should be accessible and available for users.

### ❖ Security

- User information and prescription details must be encrypted as they are sensitive information.
- Proper authentication and authorization should be in place to ensure access control.
- Data privacy for safeguard user information.

### ❖ Scalability

- The platform must be built to handle increasing user traffic and data volume requirements without sacrificing performance.

### ❖ Compatibility

- To provide a consistent user experience, the platform should be interoperable with a variety of hardware, browsers, and operating systems.

### ❖ Maintainability

- The system should be designed in easier to maintain, extend and update in the future.

### ❖ Backup and recovery

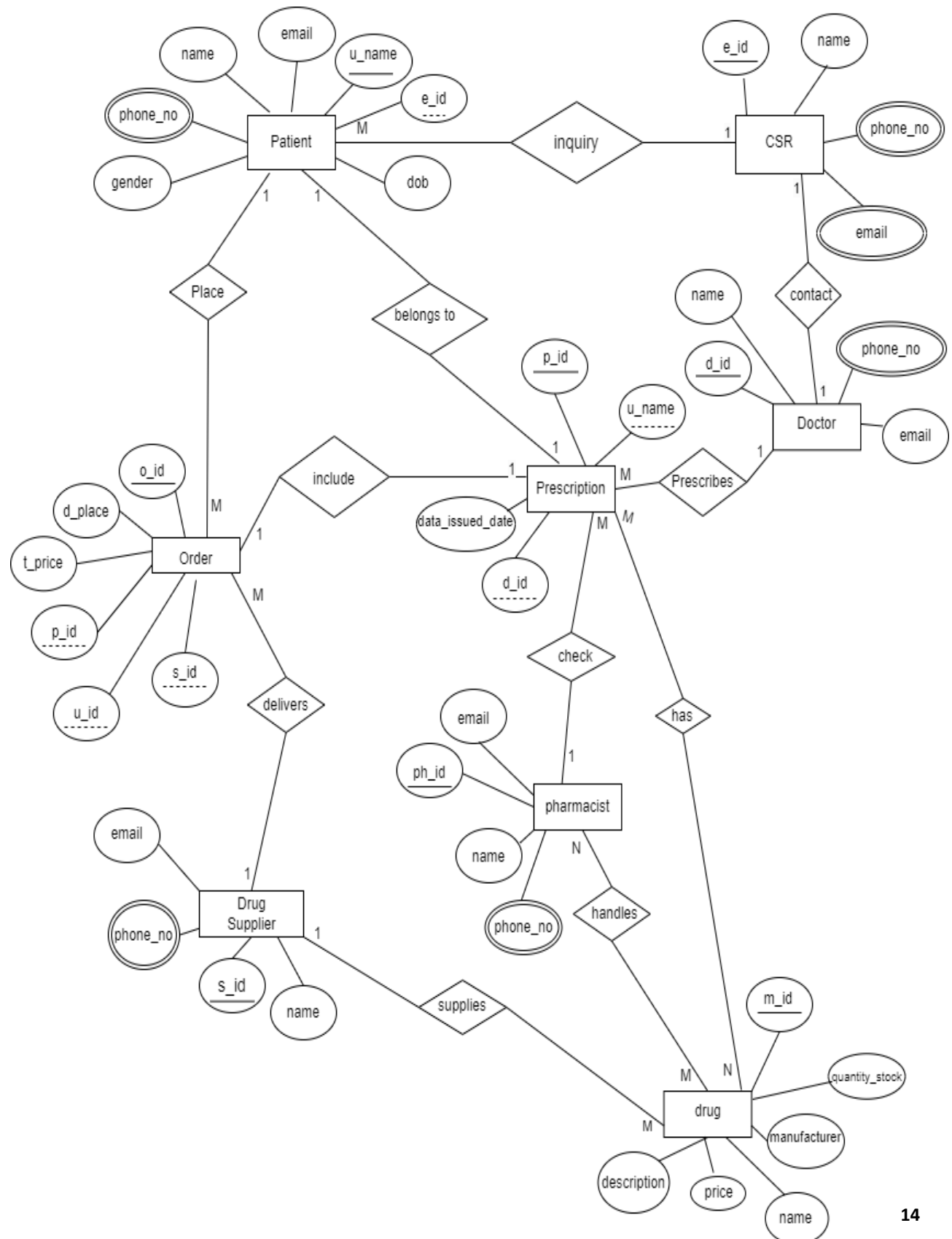
- The database and system configurations should be regularly backed up, and disaster recovery plans should be in place.

## 3.2 Data Requirements

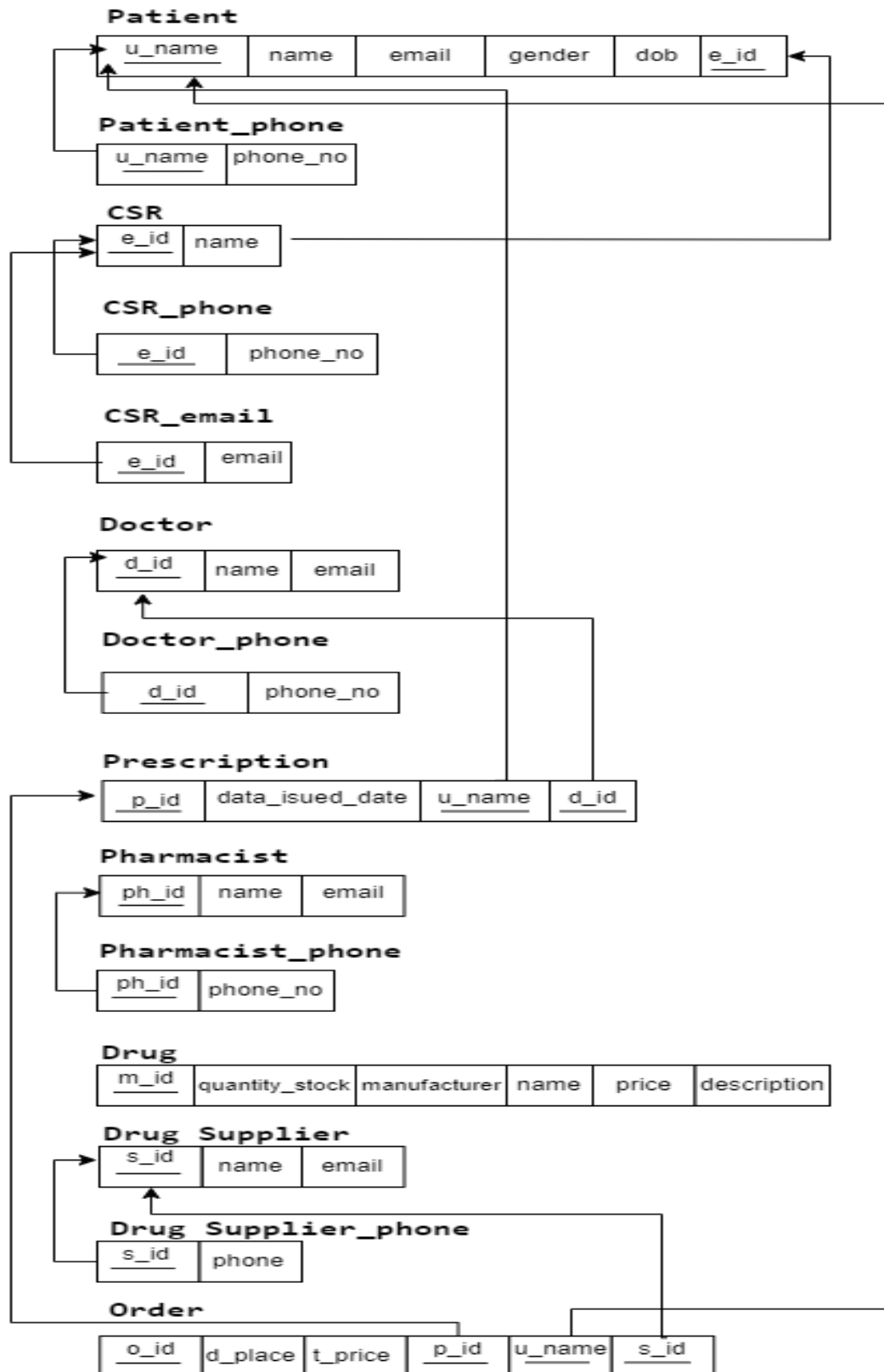
- Patient
  - u\_name
  - name
  - email
  - gender
  - dob
  - phone\_no
  
- CSR
  - e\_id
  - name
  - phone\_no
  - email
  
- Doctor
  - d\_id
  - name
  - email
  - phone\_no
  
- Prescription
  - p\_id
  - data\_issued\_date

- Phamasist
  - ph\_id
  - name
  - email
  - phone\_no
  
- Drug
  - m\_id
  - quantity\_stock
  - manufacturer
  - name
  - price
  - description
  
- Drug Supplier
  - s\_id
  - name
  - email
  - phone\_no
  
- Order
  - o\_id
  - d\_place
  - price

## 4. ER Diagram



## 5. Relational Schema



## 6. Data Base

### 6.1. Data Base Create

```
CREATE DATABASE pharmacy;
USE pharmacy;

-- Create the Patient table
CREATE TABLE patient (
    u_name VARCHAR (255) PRIMARY KEY,
    nam VARCHAR (255),
    email VARCHAR (255),
    gender VARCHAR (10),
    dob DATE,
    e_id INT,
);

-- Create the Patient Phone table
CREATE TABLE patient_phone (
    u_name VARCHAR (255),
    phone_no VARCHAR (15),
    PRIMARY KEY (u_name, phone_no),
    FOREIGN KEY (u_name) REFERENCES patient(u_name)
);

-- Create the CSR table
CREATE TABLE csr (
    e_id INT PRIMARY KEY,
    name VARCHAR (255)
);

-- Create the CSR Phone table
CREATE TABLE csr_phone (
    e_id INT,
    phone_no VARCHAR(15),
    PRIMARY KEY (e_id, phone_no),
    FOREIGN KEY (e_id) REFERENCES csr(e_id)
);

-- Create the CSR Email table
CREATE TABLE csr_email (
    e_id INT,
    email VARCHAR (255),
    PRIMARY KEY (e_id, email),
    FOREIGN KEY (e_id) REFERENCES csr(e_id)
);

-- Create the Doctor table
CREATE TABLE doctor (
    d_id INT PRIMARY KEY,
    name VARCHAR (255),
    email VARCHAR (255)
);
```



```

-- Create the Doctor Phone table
CREATE TABLE doctor_phone (
    d_id INT,
    phone_no VARCHAR(15),
    PRIMARY KEY (d_id, phone_no),
    FOREIGN KEY (d_id) REFERENCES doctor(d_id)
);

-- Create the Prescription table
CREATE TABLE prescription (
    p_id INT PRIMARY KEY,
    data_used_date DATE,
    u_name VARCHAR(255),
    d_id INT,
    FOREIGN KEY (u_name) REFERENCES patient(u_name),
    FOREIGN KEY (d_id) REFERENCES doctor(d_id)
);

-- Create the Pharmacist table
CREATE TABLE pharmacist (
    ph_id INT PRIMARY KEY,
    name VARCHAR(255),
    email VARCHAR(255)
);

-- Create the Pharmacist Phone table
CREATE TABLE pharmacist_phone (
    ph_id INT,
    phone_no VARCHAR(15),
    PRIMARY KEY (ph_id, phone_no),
    FOREIGN KEY (ph_id) REFERENCES pharmacist(ph_id)
);

-- Create the Drug table
CREATE TABLE drug (
    m_id INT PRIMARY KEY,
    quantity_stock INT,
    manufacture VARCHAR(255),
    name VARCHAR(255),
    price DECIMAL(10, 2),
    description TEXT
);

-- Create the Drug Supplier table
CREATE TABLE drug_supplier (
    s_id INT PRIMARY KEY,
    name VARCHAR(255),
    email VARCHAR(255)
);

```

```

-- Create the Drug Supplier Phone table
CREATE TABLE drug_supplier_phone (
    s_id INT,
    phone_no VARCHAR (15),
    name VARCHAR (255),
    email VARCHAR (255),
    PRIMARY KEY (s_id, phone_no),
    FOREIGN KEY (s_id) REFERENCES drug_supplier(s_id)
);

-- Remove the name and email columns
ALTER TABLE drug_supplier_phone
    DROP COLUMN email,[name];

-- Create the Order table
CREATE TABLE [order] (
    o_id INT PRIMARY KEY,
    d_place VARCHAR(255),
    t_price DECIMAL(10,2),
    p_id INT,
    u_name VARCHAR(255),
    s_id INT,
    FOREIGN KEY (p_id) REFERENCES prescription(p_id),
    FOREIGN KEY (u_name) REFERENCES patient(u_name),
    FOREIGN KEY (s_id) REFERENCES drug_supplier(s_id)
);

```

## 6.2. Data Store in Data Base

```
--patient data
INSERT INTO patient values ('Hashan','Hahsan
kumara','hashan78@gmail.com','Male','2000.08.12','001');
INSERT INTO patient values ('Lakshitha','Lakshitha
perera','lakshitha98@gmail.com','Male','2002.07.22','002');
INSERT INTO patient values ('Shehara','Shehara
kulathunga','shehara352@gmail.com','Female','2004.04.16','003');
INSERT INTO patient values ('Navindu','Navindu
wishwajith','wish789@gmail.com','Male','1999.02.05','004');
INSERT INTO patient values ('Shihan','Shihan
shevon','shihan924@gmail.com','Male','2005.12.04','005');

--patient phone data
INSERT INTO patient_phone values ('Hashan','077-5789234');
INSERT INTO patient_phone values ('Lakshitha','070-8932765');
INSERT INTO patient_phone values ('Shehara','071-6978236');
INSERT INTO patient_phone values ('Navindu','077-9642832');
INSERT INTO patient_phone values ('Shihan','070-8253795');

--csr data
INSERT INTO csr values ('001','Hashan kumara');
INSERT INTO csr values ('002','Lakshitha perera');
INSERT INTO csr values ('003','Shehara kulathunga');
INSERT INTO csr values ('004','Navindu wishwajith');
INSERT INTO csr values ('005','Shihan shevon');

--csr phone data
INSERT INTO csr_phone values ('001','077-5789234');
INSERT INTO csr_phone values ('002','070-8932765');
INSERT INTO csr_phone values ('003','071-6978236');
INSERT INTO csr_phone values ('004','077-9642832');
INSERT INTO csr_phone values ('005','070-8253795');

--csr email data
INSERT INTO csr_email values ('001','hashan78@gmail.com');
INSERT INTO csr_email values ('002','lakshitha98@gmail.com');
INSERT INTO csr_email values ('003','shehara352@gmail.com');
INSERT INTO csr_email values ('004','wish789@gmail.com');
INSERT INTO csr_email values ('005','shihan924@gmail.com');

--doctor data
INSERT INTO doctor values ('121','Dr.Hashan thilanga','hashan45@gmail.com');
INSERT INTO doctor values ('122','Dr.Nilushi dias','nilushi94@gmail.com');
INSERT INTO doctor values ('123','Dr.Vihanga K seenaadeera','vihanga@gmail.com');
INSERT INTO doctor values ('124','Dr.Dharmasena
liyanaarachchi','dharmasena48c@gmail.com');
INSERT INTO doctor values ('125','Dr.Hansani tharaka','hansani87dk@gmail.com');

--doctor phone data
INSERT INTO doctor_phone values ('121','077-9615238');
INSERT INTO doctor_phone values ('122','070-8234961');
INSERT INTO doctor_phone values ('123','077-6941359');
INSERT INTO doctor_phone values ('124','070-6945832');
```

```

INSERT INTO doctor_phone values ('125','077-6928395');

--prescription data
INSERT INTO prescription values ('4051','10/11/2023','Hashan','121');
INSERT INTO prescription values ('4052','10/11/2023','Lakshitha','123');
INSERT INTO prescription values ('4053','11/11/2023','Shehara','123');
INSERT INTO prescription values ('4054','11/11/2023','Navindu','124');
INSERT INTO prescription values ('4055','05/11/2023','Shihan','125');

--pharmacist data
INSERT INTO pharmacist values ('1018','Miss.Dilanki','dilanki892gmail.com');
INSERT INTO pharmacist values ('1019','Mr.H.Kumara','harendra58d@gmail.com');
INSERT INTO pharmacist values ('1020','Mr.J.Ajith','jehan254@gmail.com');
INSERT INTO pharmacist values ('1021','Mrs.Thilini','thiliniidias98@gmail.com');
INSERT INTO pharmacist values ('1022','Mrs.K.Hewage','kalhara69@gmail.com');

--pharmacist phone data
INSERT INTO pharmacist_phone values ('1018','077-4692386');
INSERT INTO pharmacist_phone values ('1019','077-6379218');
INSERT INTO pharmacist_phone values ('1020','077-8269346');
INSERT INTO pharmacist_phone values ('1021','077-8291376');
INSERT INTO pharmacist_phone values ('1022','077-5569238');

--drug data
INSERT INTO drug values ('2834','40000','GSK','Panadol','370','for high temperature');
INSERT INTO drug values ('4593','10000','API','Loretedin','5.75','vomiting tablets');
INSERT INTO drug values ('2507','12000','API','Omeprazol','1.75','for gastritis');
INSERT INTO drug values ('2503','30000','FDA','Flags','50','for cough');
INSERT INTO drug values ('5682','45000','API','Metronidazole','15.35','for antibiotic');

--drug supplier data
INSERT INTO drug_supplier values ('3040','Hashan D.K.S','hashan98@gmail.com');
INSERT INTO drug_supplier values ('3041','Shehan semasinghe','semasinghe9d@gmail.com');
INSERT INTO drug_supplier values ('3042','Ranuka madubhashana','ranukapp56@gmail.com');
INSERT INTO drug_supplier values ('3043','Ridmi nawodaa','ridmi96@gmail.com');
INSERT INTO drug_supplier values ('3044','Kavindu G.L','lakshitha78k@gmail.com');

--drug supplier phone data
INSERT INTO drug_supplier_phone values ('3040','077-5639741');
INSERT INTO drug_supplier_phone values ('3041','077-5829364');
INSERT INTO drug_supplier_phone values ('3042','077-1937852');
INSERT INTO drug_supplier_phone values ('3043','077-6644893');
INSERT INTO drug_supplier_phone values ('3044','077-2286394');

--order data
INSERT INTO [order] values ('4001','Maharagama','4690','4051','Hashan','3040');
INSERT INTO [order] values ('4002','kahanthota
malabe','3500.50','4052','Lakshitha','3041');
INSERT INTO [order] values ('4003','Ragama','800.45','4053','Shehara','3042');
INSERT INTO [order] values ('4004','kaduwela','2500','4054','Navindu','3043');
INSERT INTO [order] values ('4005','kiribathgoda','1300','4055','Shihan','3044');

SELECT * FROM [order];

```

## 7. Example

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left displays the 'pharmacy' database structure. The SQL Query Editor in the center contains the following SQL script:

```
--patient data
INSERT INTO patient values ('Hashan','Hahsan kumara','hashan78@gmail.com','Male','2000.08.12','001');
INSERT INTO patient values ('Lakshitha','Lakshitha perera','lakshitha98@gmail.com','Male','2002.07.22','002');
INSERT INTO patient values ('Shehara','Shehara kulathunga','shehara352@gmail.com','Female','2004.04.16','003');
INSERT INTO patient values ('Navindu','Navindu wihajith','wih789@gmail.com','Male','1999.02.05','004');
INSERT INTO patient values ('Shihan','Shihan shevon','shihan924@gmail.com','Male','2005.12.04','005');

SELECT * FROM patient;
```

The Results pane at the bottom shows the output of the SELECT query, displaying a table with 5 rows and 6 columns: u\_name, nam, email, gender, dob, and e\_id.

	u_name	nam	email	gender	dob	e_id
1	Hashan	Hahsan kumara	hashan78@gmail.com	Male	2000-08-12	1
2	Lakshitha	Lakshitha perera	lakshitha98@gmail.com	Male	2002-07-22	2
3	Navindu	Navindu wihajith	wih789@gmail.com	Male	1999-02-05	4
4	Shehara	Shehara kulathunga	shehara352@gmail.com	Female	2004-04-16	3
5	Shihan	Shihan shevon	shihan924@gmail.com	Male	2005-12-04	5

The status bar at the bottom indicates 'Query executed successfully.' and '5 rows'.

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left displays the 'pharmacy' database structure. The SQL Query Editor in the center contains the following SQL script:

```
--patient data
INSERT INTO patient values ('Hashan','Hahsan kumara','hashan78@gmail.com','Male','2000.08.12','001');
INSERT INTO patient values ('Lakshitha','Lakshitha perera','lakshitha98@gmail.com','Male','2002.07.22','002');
INSERT INTO patient values ('Shehara','Shehara kulathunga','shehara352@gmail.com','Female','2004.04.16','003');
INSERT INTO patient values ('Navindu','Navindu wihajith','wih789@gmail.com','Male','1999.02.05','004');
INSERT INTO patient values ('Shihan','Shihan shevon','shihan924@gmail.com','Male','2005.12.04','005');

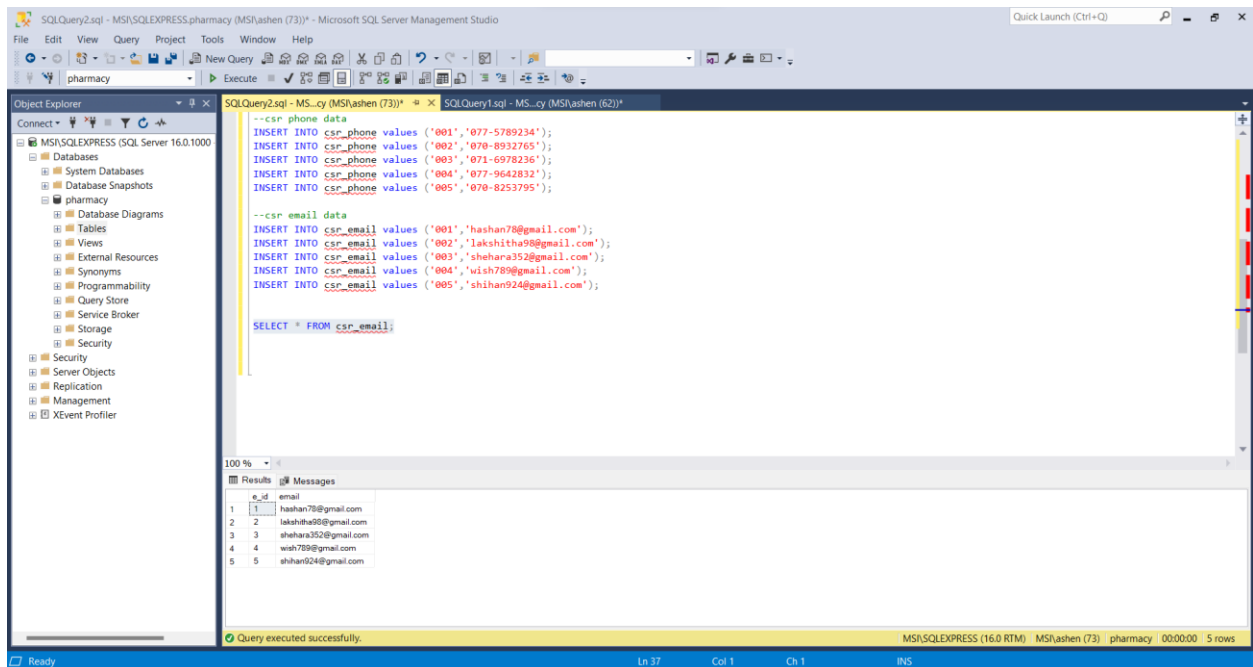
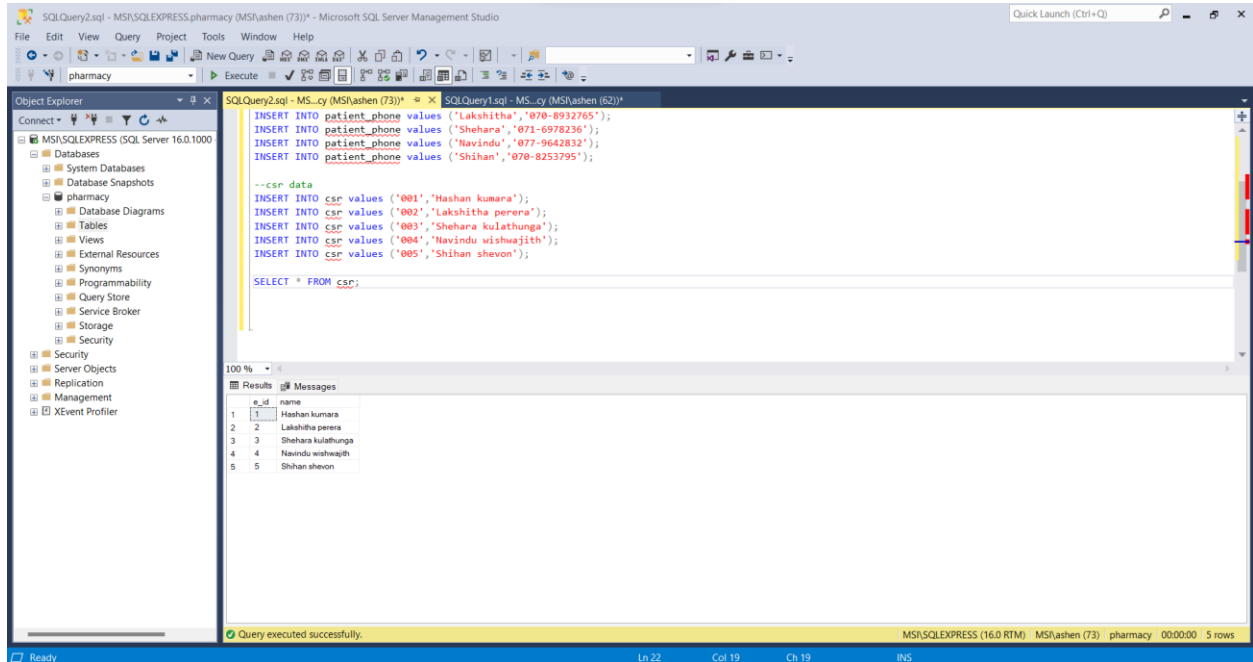
--patient phone data
INSERT INTO patient_phone values ('Hashan','077-5789234');
INSERT INTO patient_phone values ('Lakshitha','070-8932765');
INSERT INTO patient_phone values ('Shehara','071-6978236');
INSERT INTO patient_phone values ('Navindu','077-9642832');
INSERT INTO patient_phone values ('Shihan','070-8253795');

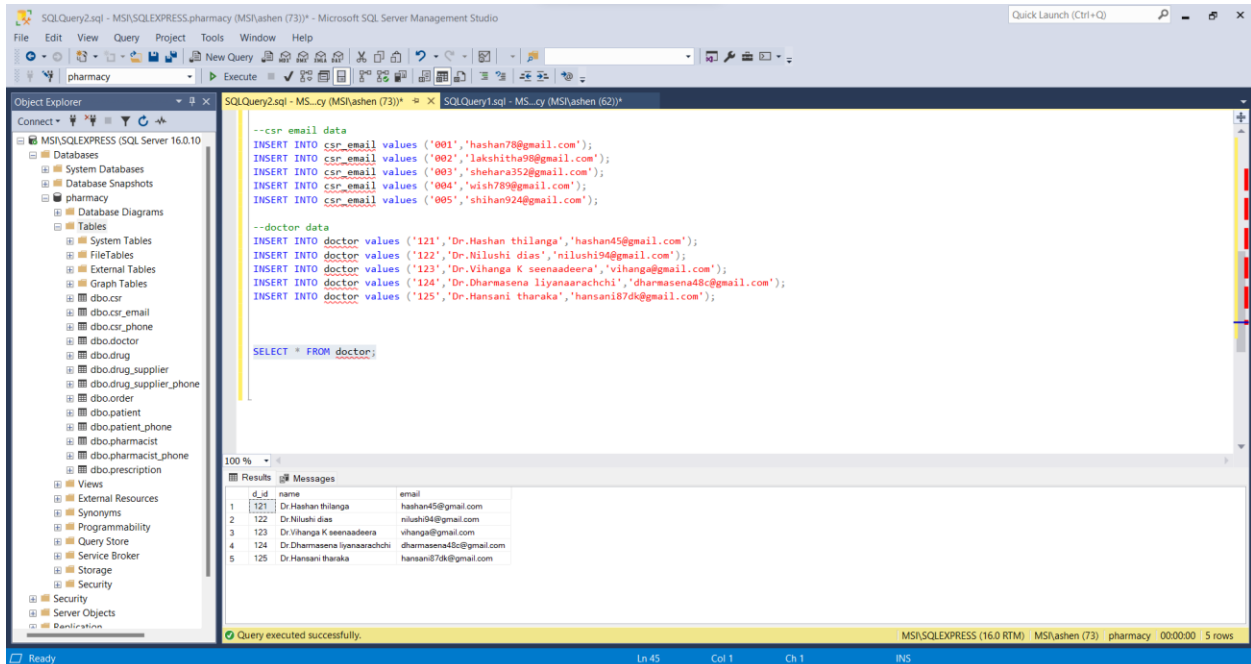
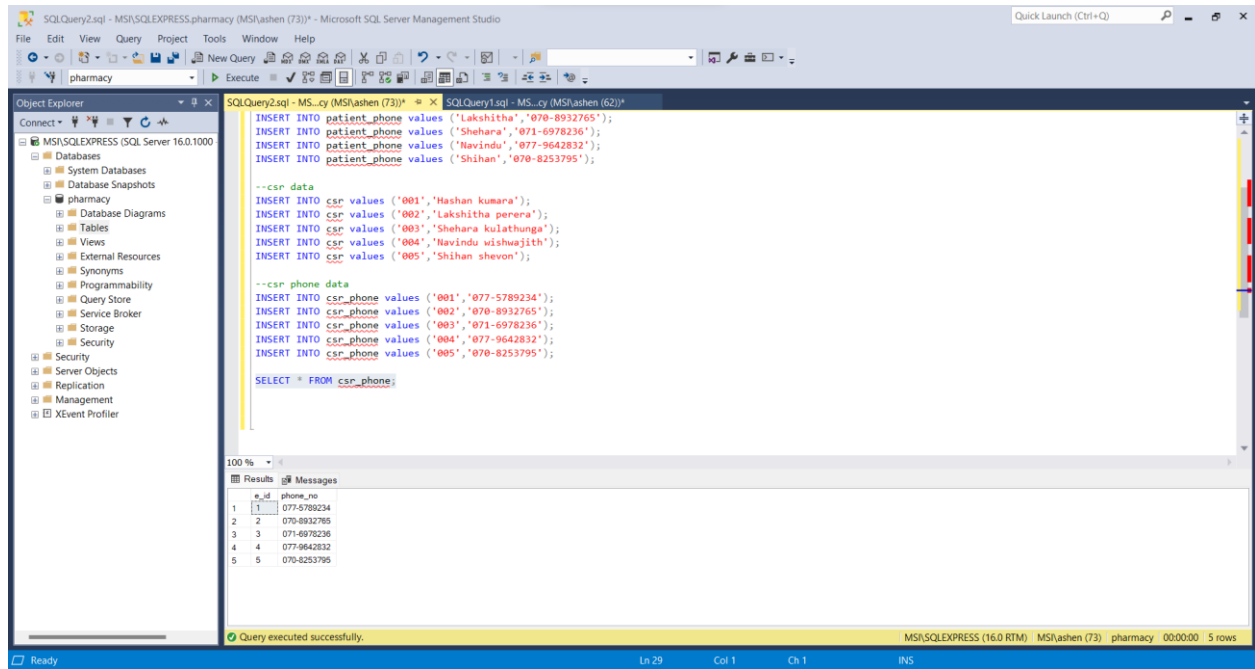
SELECT * FROM patient_phone;
```

The Results pane at the bottom shows the output of the SELECT query, displaying a table with 5 rows and 2 columns: u\_name and phone\_no.

	u_name	phone_no
1	Hashan	077-5789234
2	Lakshitha	070-8932765
3	Navindu	077-9642832
4	Shehara	071-6978236
5	Shihan	070-8253795

The status bar at the bottom indicates 'Query executed successfully.' and '5 rows'.





SQLQuery2.sql - MS\SQLEXPRESS\pharmacy (MS\ashen (73)) - Microsoft SQL Server Management Studio

Object Explorer: MSSQLSERVER (SQL Server 16.0.10) > Databases > pharmacy > Tables > dbo.doctor\_phone

```
--csr_email data
INSERT INTO csr_email values ('001','hashan78@gmail.com');
INSERT INTO csr_email values ('002','lakshitha98@gmail.com');
INSERT INTO csr_email values ('003','shehara352@gmail.com');
INSERT INTO csr_email values ('004','wish789@gmail.com');
INSERT INTO csr_email values ('005','shihan924@gmail.com');

--doctor data
INSERT INTO doctor values ('121','Dr.Hashan thilanga','hashan45@gmail.com');
INSERT INTO doctor values ('122','Dr.Nilushi dias','nilushi94@gmail.com');
INSERT INTO doctor values ('123','Dr.Vihanga K seenadeera','vihanga@gmail.com');
INSERT INTO doctor values ('124','Dr.Dharmasena liyanaarachchi','dharmasena48@gmail.com');
INSERT INTO doctor values ('125','Dr.Hansani tharaka','hansani87dk@gmail.com');

--doctor phone data
INSERT INTO doctor_phone values ('121','077-9615238');
INSERT INTO doctor_phone values ('122','070-8234961');
INSERT INTO doctor_phone values ('123','077-6941359');
INSERT INTO doctor_phone values ('124','070-6945832');
INSERT INTO doctor_phone values ('125','077-6928395');

SELECT * FROM doctor_phone;
```

Results:

d_id	phone_no
121	077-9615238
122	070-8234961
123	077-6941359
124	070-6945832
125	077-6928395

Query executed successfully. MSSQLSERVER (16.0 RTM) MS\ashen (73) pharmacy 00:00:00 5 rows

SQLQuery2.sql - MS\SQLEXPRESS\pharmacy (MS\ashen (73)) - Microsoft SQL Server Management Studio

Object Explorer: MSSQLSERVER (SQL Server 16.0.10) > Databases > pharmacy > Tables > dbo.prescription

```
--doctor phone data
INSERT INTO doctor_phone values ('121','077-9615238');
INSERT INTO doctor_phone values ('122','070-8234961');
INSERT INTO doctor_phone values ('123','077-6941359');
INSERT INTO doctor_phone values ('124','070-6945832');
INSERT INTO doctor_phone values ('125','077-6928395');

--prescription data
INSERT INTO prescription values ('4051','10/11/2023','Hashan','121');
INSERT INTO prescription values ('4052','10/11/2023','Lakshitha','123');
INSERT INTO prescription values ('4053','11/11/2023','Shehara','123');
INSERT INTO prescription values ('4054','11/11/2023','Navindu','124');
INSERT INTO prescription values ('4055','05/11/2023','Shihan','125');

SELECT * FROM prescription;
```

Results:

p_id	data_used_date	u_name	d_id
4051	2023-10-11	Hashan	121
4052	2023-10-11	Lakshitha	123
4053	2023-11-11	Shehara	123
4054	2023-11-11	Navindu	124
4055	2023-05-11	Shihan	125

Query executed successfully. MSSQLSERVER (16.0 RTM) MS\ashen (73) pharmacy 00:00:00 5 rows



SQLQuery2.sql - MS\SQLEXPRESS:pharmacy (MS\ashen (73)) - Microsoft SQL Server Management Studio

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SQLQuery2.sql - MS\_...cy (MS\ashen (73))

SQLQuery1.sql - MS\_...cy (MS\ashen (62))

```

INSERT INTO doctor_phone values ('123','077-6941359');
INSERT INTO doctor_phone values ('124','070-6945832');
INSERT INTO doctor_phone values ('125','077-6928395');

--prescription data
INSERT INTO prescription values ('4051','10/11/2023','Hashan','121');
INSERT INTO prescription values ('4052','10/11/2023','Lakshitha','123');
INSERT INTO prescription values ('4053','11/11/2023','Shehara','123');
INSERT INTO prescription values ('4054','11/11/2023','Navindu','124');
INSERT INTO prescription values ('4055','05/11/2023','Shihan','125');

--pharmacist data
INSERT INTO pharmacist values ('1018','Miss.Dilanki','dilanki892@gmail.com');
INSERT INTO pharmacist values ('1019','Mr.H.Kumara','harendra58@gmail.com');
INSERT INTO pharmacist values ('1020','Mr.J.Ajith','jehan254@gmail.com');
INSERT INTO pharmacist values ('1021','Mrs.Thilini','thilini98@gmail.com');
INSERT INTO pharmacist values ('1022','Mrs.K.Hewage','kalhara69@gmail.com');

SELECT * FROM pharmacist;

```

100 %

Results Messages

ph_id	name	email
1018	Miss.Dilanki	dilanki892@gmail.com
1019	Mr.H.Kumara	harendra58@gmail.com
1020	Mr.J.Ajith	jehan254@gmail.com
1021	Mrs.Thilini	thilini98@gmail.com
1022	Mrs.K.Hewage	kalhara69@gmail.com

Query executed successfully.

MS\SQLEXPRESS (16.0 RTM) MS\ashen (73) pharmacy 00:00:00 5 rows

Ready Ln 66 Col 1 Ch 1 INS

SQLQuery2.sql - MS\SQLEXPRESS:pharmacy (MS\ashen (73)) - Microsoft SQL Server Management Studio

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dbo.csr\_phone

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dbo.patient\_phone

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SQLQuery2.sql - MS\_...cy (MS\ashen (73))

SQLQuery1.sql - MS\_...cy (MS\ashen (62))

```

--pharmacist data
INSERT INTO pharmacist values ('1018','Miss.Dilanki','dilanki892@gmail.com');
INSERT INTO pharmacist values ('1019','Mr.H.Kumara','harendra58@gmail.com');
INSERT INTO pharmacist values ('1020','Mr.J.Ajith','jehan254@gmail.com');
INSERT INTO pharmacist values ('1021','Mrs.Thilini','thilini98@gmail.com');
INSERT INTO pharmacist values ('1022','Mrs.K.Hewage','kalhara69@gmail.com');

--pharmacist phone data
INSERT INTO pharmacist_phone values ('1018','077-4692386');
INSERT INTO pharmacist_phone values ('1019','077-6379218');
INSERT INTO pharmacist_phone values ('1020','077-8269346');
INSERT INTO pharmacist_phone values ('1021','077-8291376');
INSERT INTO pharmacist_phone values ('1022','077-5569238');

SELECT * FROM pharmacist_phone;

```

100 %

Results Messages

ph_id	phone_no
1018	077-4692386
1019	077-6379218
1020	077-8269346
1021	077-8291376
1022	077-5569238

Query executed successfully.

MS\SQLEXPRESS (16.0 RTM) MS\ashen (73) pharmacy 00:00:00 5 rows

Ready Ln 71 Col 1 Ch 1 INS

SQLQuery2.sql - MSN/SQLEXPRESS.pharmacy (MSI\ashen (73)) - Microsoft SQL Server Management Studio

Object Explorer: Connect to MSN/SQLEXPRESS (SQL Server 16.0.10) > Databases > pharmacy > Tables > dbo.drug

```

--pharmacy
INSERT INTO pharmacist_phone values ('1018','077-4692386');
INSERT INTO pharmacist_phone values ('1019','077-6379218');
INSERT INTO pharmacist_phone values ('1020','077-8269346');
INSERT INTO pharmacist_phone values ('1021','077-8291376');
INSERT INTO pharmacist_phone values ('1022','077-5569238');

--drug data
INSERT INTO drug values ('2834','40000','GSK','Panadol','370','for high temperature');
INSERT INTO drug values ('4593','10000','API','Loretedin','5.75','vomiting tablets');
INSERT INTO drug values ('2507','12000','API','Omeprazol','1.75','for gastritis');
INSERT INTO drug values ('2503','30000','FDA','Flags','50','for cough');
INSERT INTO drug values ('5682','45000','API','Metronidazole','15.35','for antibiotic');

SELECT * FROM drug;

```

Results: 5 rows

m_id	quantity	stock	manufacture	name	price	description
2503	30000	FDA	Flags	50.00	for cough	
2507	12000	API	Omeprazol	1.75	for gastritis	
2834	40000	GSK	Panadol	370.00	for high temperature	
4593	10000	API	Loretedin	5.75	vomiting tablets	
5682	45000	API	Metronidazole	15.35	for antibiotic	

Query executed successfully. MSI/SQLEXPRESS (16.0 RTM) MSI\ashen (73) pharmacy 00:00:00 5 rows

SQLQuery2.sql - MSN/SQLEXPRESS.pharmacy (MSI\ashen (73)) - Microsoft SQL Server Management Studio

Object Explorer: Connect to MSN/SQLEXPRESS (SQL Server 16.0.10) > Databases > pharmacy > Tables > dbo.drug\_supplier

```

--pharmacy
INSERT INTO pharmacist_phone values ('1021','077-8291376');
INSERT INTO pharmacist_phone values ('1022','077-5569238');

--drug data
INSERT INTO drug values ('2834','40000','GSK','Panadol','370','for high temperature');
INSERT INTO drug values ('4593','10000','API','Loretedin','5.75','vomiting tablets');
INSERT INTO drug values ('2507','12000','API','Omeprazol','1.75','for gastritis');
INSERT INTO drug values ('2503','30000','FDA','Flags','50','for cough');
INSERT INTO drug values ('5682','45000','API','Metronidazole','15.35','for antibiotic');

--drug supplier data
INSERT INTO drug_supplier values ('3040','Hashan D.K.S','hashan99@gmail.com');
INSERT INTO drug_supplier values ('3041','Shehan semasinghe','semasinghe94@gmail.com');
INSERT INTO drug_supplier values ('3042','Ranuka madubhashana','ranukapp56@gmail.com');
INSERT INTO drug_supplier values ('3043','Ridmi nawodaa','ridmi96@gmail.com');
INSERT INTO drug_supplier values ('3044','Kavindu G.L','lakshitha78k@gmail.com');

SELECT * FROM drug_supplier;

```

Results: 5 rows

s_id	name	email
3040	Hashan D.K.S	hashan99@gmail.com
3041	Shehan semasinghe	semasinghe94@gmail.com
3042	Ranuka madubhashana	ranukapp56@gmail.com
3043	Ridmi nawodaa	ridmi96@gmail.com
3044	Kavindu G.L	lakshitha78k@gmail.com

Query executed successfully. MSI/SQLEXPRESS (16.0 RTM) MSI\ashen (73) pharmacy 00:00:00 5 rows

SQLQuery2.sql - MS\SQLEXPRESS:pharmacy (MS\ashen (73)) - Microsoft SQL Server Management Studio

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dbo.drug

dbo.drug\_supplier

dbo.drug\_supplier\_phone

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SQLQuery2.sql - MS...cy (MS\ashen (73))

```
--drug data
INSERT INTO drug values ('2834','40000','GSK','Panadol','370','for high temperature');
INSERT INTO drug values ('4593','10000','API','Loretodin','5.75','vomiting tablets');
INSERT INTO drug values ('2507','12000','API','Omeprazol','1.75','for gastritis');
INSERT INTO drug values ('2503','30000','FDA','Flags','50','for cough');
INSERT INTO drug values ('5682','45000','API','Metronidazole','15.35','for antibiotic');

--drug supplier data
INSERT INTO drug_supplier values ('3040','Hashan D.K.S','hashan90@gmail.com');
INSERT INTO drug_supplier values ('3041','Shehan semasinghe','semasinghe9@gmail.com');
INSERT INTO drug_supplier values ('3042','Ranuka madubhashana','ranukapp56@gmail.com');
INSERT INTO drug_supplier values ('3043','Ridmi navodaa','ridmi90@gmail.com');
INSERT INTO drug_supplier values ('3044','Kavindu G.L','lakshitha78@gmail.com');

--drug supplier phone data
INSERT INTO drug_supplier_phone values ('3040','077-5639741');
INSERT INTO drug_supplier_phone values ('3041','077-5829364');
INSERT INTO drug_supplier_phone values ('3042','077-1937852');
INSERT INTO drug_supplier_phone values ('3043','077-6644893');
INSERT INTO drug_supplier_phone values ('3044','077-2286394');

SELECT * FROM drug_supplier_phone;
```

Results

s_id	phone_no
3040	077-5639741
3041	077-5829364
3042	077-1937852
3043	077-6644893
3044	077-2286394

Query executed successfully.

MS\SQLEXPRESS (16.0 RTM) MS\ashen (73) pharmacy 00:00:00 5 rows

SQLQuery2.sql - MS\SQLEXPRESS:pharmacy (MS\ashen (73)) - Microsoft SQL Server Management Studio

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dbo.csr\_email

dbo.csr\_phone

dbo.doctor

dbo.doctor\_phone

dbo.drug

dbo.drug\_supplier

dbo.drug\_supplier\_phone

dbo.patient

dbo.patient\_phone

dbo.pharmacist

dbo.pharmacist\_phone

dbo.prescription

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SQLQuery2.sql - MS...cy (MS\ashen (73))

```
INSERT INTO drug_supplier values ('3043','Ridmi navodaa','ridmi90@gmail.com');
INSERT INTO drug_supplier values ('3044','Kavindu G.L','lakshitha78@gmail.com');

--drug supplier phone data
INSERT INTO drug_supplier_phone values ('3040','077-5639741');
INSERT INTO drug_supplier_phone values ('3041','077-5829364');
INSERT INTO drug_supplier_phone values ('3042','077-1937852');
INSERT INTO drug_supplier_phone values ('3043','077-6644893');
INSERT INTO drug_supplier_phone values ('3044','077-2286394');

--order data
INSERT INTO [order] values ('4001','Maharagama','4690','4051','Hashan','3040');
INSERT INTO [order] values ('4002','kahanthota malabe','3500.50','4052','Lakshitha','3041');
INSERT INTO [order] values ('4003','Ragama','800.45','4053','Shehara','3042');
INSERT INTO [order] values ('4004','kaduwela','2500','4054','Navindu','3043');
INSERT INTO [order] values ('4005','kiribathgoda','1300.00','4055','Shihan','3044');

SELECT * FROM [order];
```

Results

o_id	d_place	l_price	p_id	u_name	s_id
4001	Maharagama	4690.00	4051	Hashan	3040
4002	kahanthota malabe	3500.50	4052	Lakshitha	3041
4003	Ragama	800.45	4053	Shehara	3042
4004	kaduwela	2500.00	4054	Navindu	3043
4005	kiribathgoda	1300.00	4055	Shihan	3044

Query executed successfully.

MS\SQLEXPRESS (16.0 RTM) MS\ashen (73) pharmacy 00:00:00 5 rows

## 8. Performance Requirements

A major role is played by Performance Requirements in making the system very successful. They are as follow,

- ❖ The system must be operational seven days a week, 365 days a year.
- ❖ A Registered User can access the system process any time by entering.
- ❖ Login to the web site and loading pages must be done within a few minutes.
- ❖ System availability and reliability are the performance requirements for this system.
- ❖ This system should have response time.
- ❖ Response time must not exceed a few seconds.
- ❖ Registered users can view pharmacy details.
- ❖ Registered users can find the pharmacy order details and delete the account details.
- ❖ Pharmacists can deliver the orders, manage the user account, manage the customer details, edit and update pharmacy details.
- ❖ A system can respond to a customer's message.
- ❖ A drug supplier can manage the pharmacy order items.
- ❖ Developers can develop new functions for the website.
- ❖ Developers can update the online pharmacy system.
- ❖ Developers can delete and edit the errors in the system.
- ❖ System can provide the anytime pharmacy details.
- ❖ The system provides the ability for pharmacists to manage the staff account.

## 9. Security Requirements

- ❖ Encrypting public information before sending it to the database is a good practice here.
- ❖ Inability to view information and features restricted to unauthorized users.
- ❖ Pharmacies should consider installing a silent panic alarm.
- ❖ Alarm systems that provide immediate notification to authorities of the emergency.
- ❖ The password of the user account must be a strong password which includes numbers, uppercase or lowercase letters and special characters.
- ❖ For one email address, there should be only one password and user account.
- ❖ Only the pharmacist can access, protect, and modify the data of the system.
- ❖ Pharmacies must comply with regulatory requirements for a monitored security system which transmits an available, visual, or electronic signal warning of intrusion.