



Name: Mahmoud Rumaneh

ID: 20120103

DATABASE
DESIGN &
DEVELOPMENT

CONTENTS

Introduction	3
Scenario	3
User groups & Business needs:	4
ERD.....	4
Conceptual	4
Logical	5
Physical	6
Mapping	6
Normalization	7
First normal form	7
Second normal form	7
Create Database and Tables	8
Create users and give privileges + View and Procedures.....	14
Create Users.....	14
Give Privileges.....	14
Procedures.....	17
View	18
Technical Documentation	20
The Scenario.....	20
Business needs & User Groups	20
ER Diagram.....	20
1. conceptual schema.....	20
2. logical schema	21
3. Physical schema.....	21
Mapping	22
Normalization	22
1) First normal form.....	22
2) Second normal form	22
Install Wamp server and log in to phpMyAdmin	23
Technical support.....	26
User Documentation.....	26
The Scenario.....	26
User groups & business needs	27
User support	27

Testing.....	27
Data validation	27
1. data type	27
2. Uniqueness.....	27
3. Procedure.....	28
4. View	28
5. Select.....	28
6. Users privileges	29

INTRODUCTION

I work for a large company as an IT database developer and I have been asked to renew TickTeach Inc's database system and provide the technology needed to operate the system and investigate the requirements of the system, so I have to design, create and implement the system, the documents required to make the database are that it is a company specialized in dental clinics to arrange the database for them and all clinics within this company have the same key data information and there is no correlation or relationship between any dental clinic and another clinic in the company.

SCENARIO

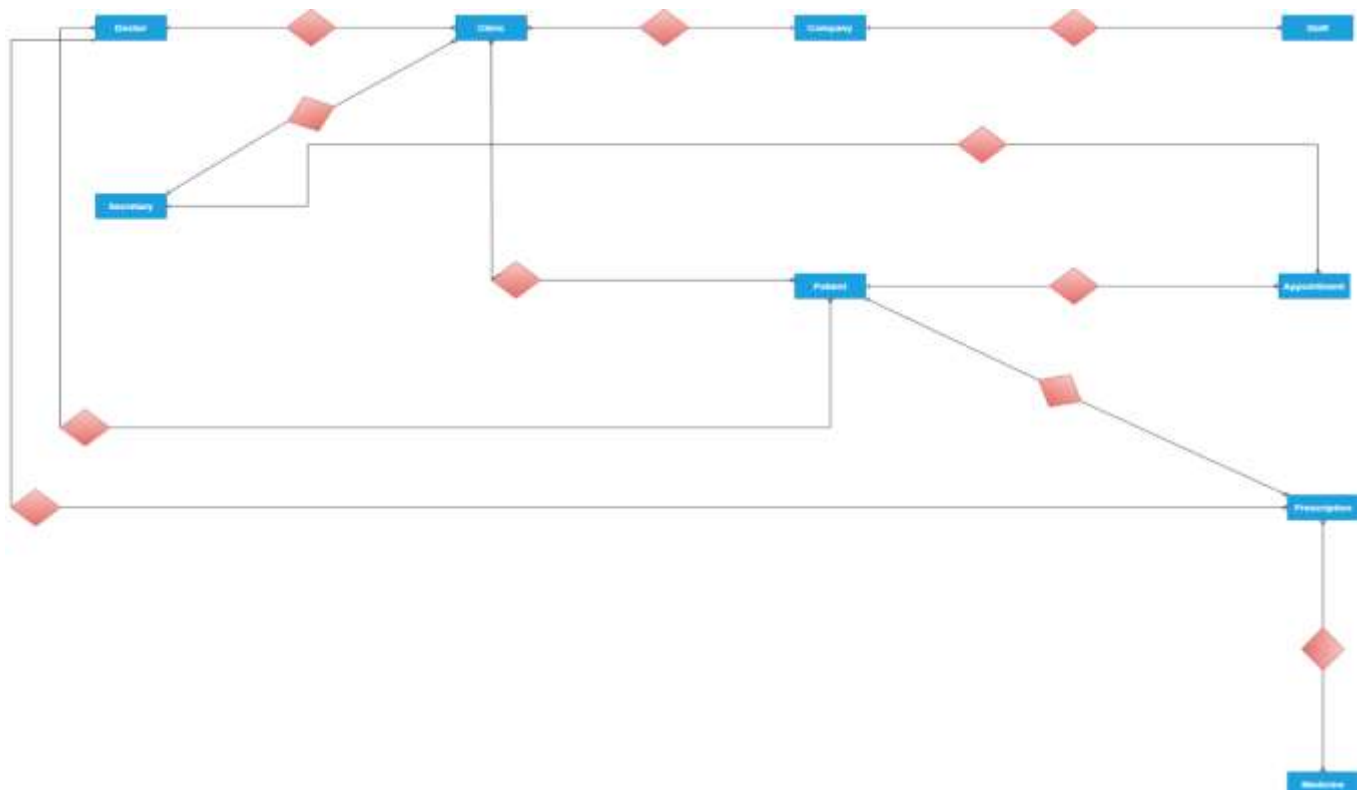
This company has many clinics, patients and doctors and this **company** has name, address (city, street name and building number), phone, email and offices. This company has many staffs and each **staff** has: name (first name and last name), Id, email, phones and type of work. Each **clinic** has name, address (city, street name and building number), contact number. Each clinic has one doctor and one secretary but the doctor and the secretary can work in more than one clinic, and each doctor can take care of more than one patient and the patient can go on more than one doctor and one secretary, the database keeps each **doctor's** information including: name (first name and last name), address (city and street name), communication phone, area of specialization and Id. **Patient** information is also maintained by the database system such as: name (first name, second name and last name), address (city, street name and building number), date of birth, age, national number. Each patient has **appointments** in: date, day, time and Id. Each patient has prescriptions was written by the doctor, the doctor can write more than one prescription and each **prescription** has: Id, amount of medicine and diagnoses, each prescription has many medicines, each medicine can be in more than one prescription and it has amount of dose and each **medicine** has: name and Id. The patient can schedule and cancel appointments and order prescription through the clinic's contact number by secretary and the secretary can schedule and cancel more than one appointment. The **secretary** has information such as: name (first name and last name), national number, academic specialization and experience.

USER GROUPS & BUSINESS NEEDS:

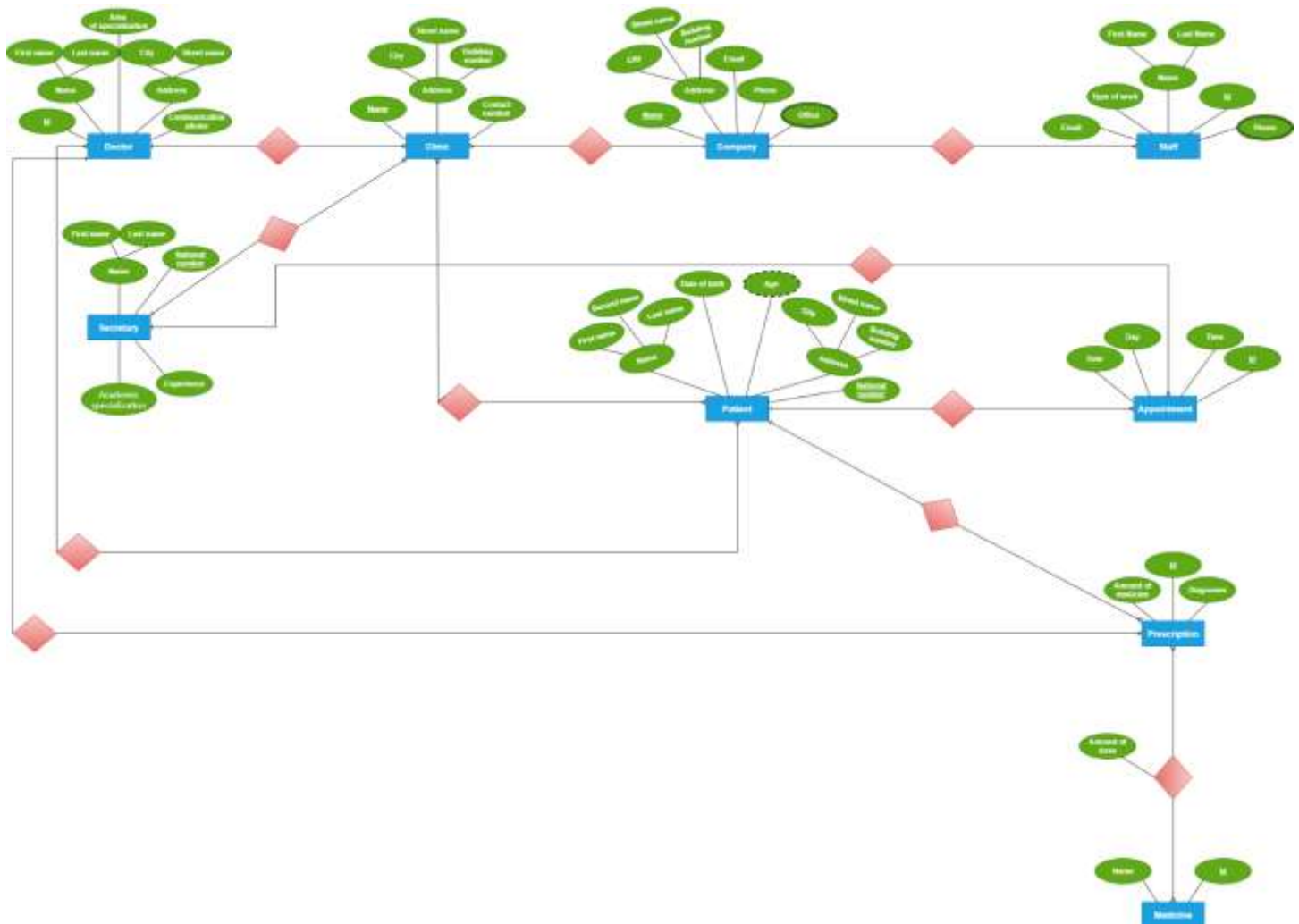
- 1. Staff:** Seeing and solving the technical problems in the system in all clinics, seeing the information of the medicines for each clinic and the number of it, taking over the affairs of employees in terms of working hours and editing for their personal information and so on
- 2. Secretary:** Booking appointments and adding patient's information to the system
- 3. Doctor:** Read the patient's medical history and the date of his visits to the clinic to see the surgeries or procedures he has performed in the past, so that the doctor avoids any things that may negatively affect the patient's health
- 4. Patient:** See his upcoming and previous appointment information, his medical history and the medications he should take through the prescription
- 5. Manager of the clinic:** See the weekdays with the highest number of appointments so that he takes some decisions about the number of doctors in the same clinic and organize their working hours
- 6. Manager of the company:** See the information of all clinics within the company and the employees who work within this company in terms of the most visited clinics by patients and the information of each clinic in terms of real estate, location, licenses, tax, and periodic maintenance of it

ERD

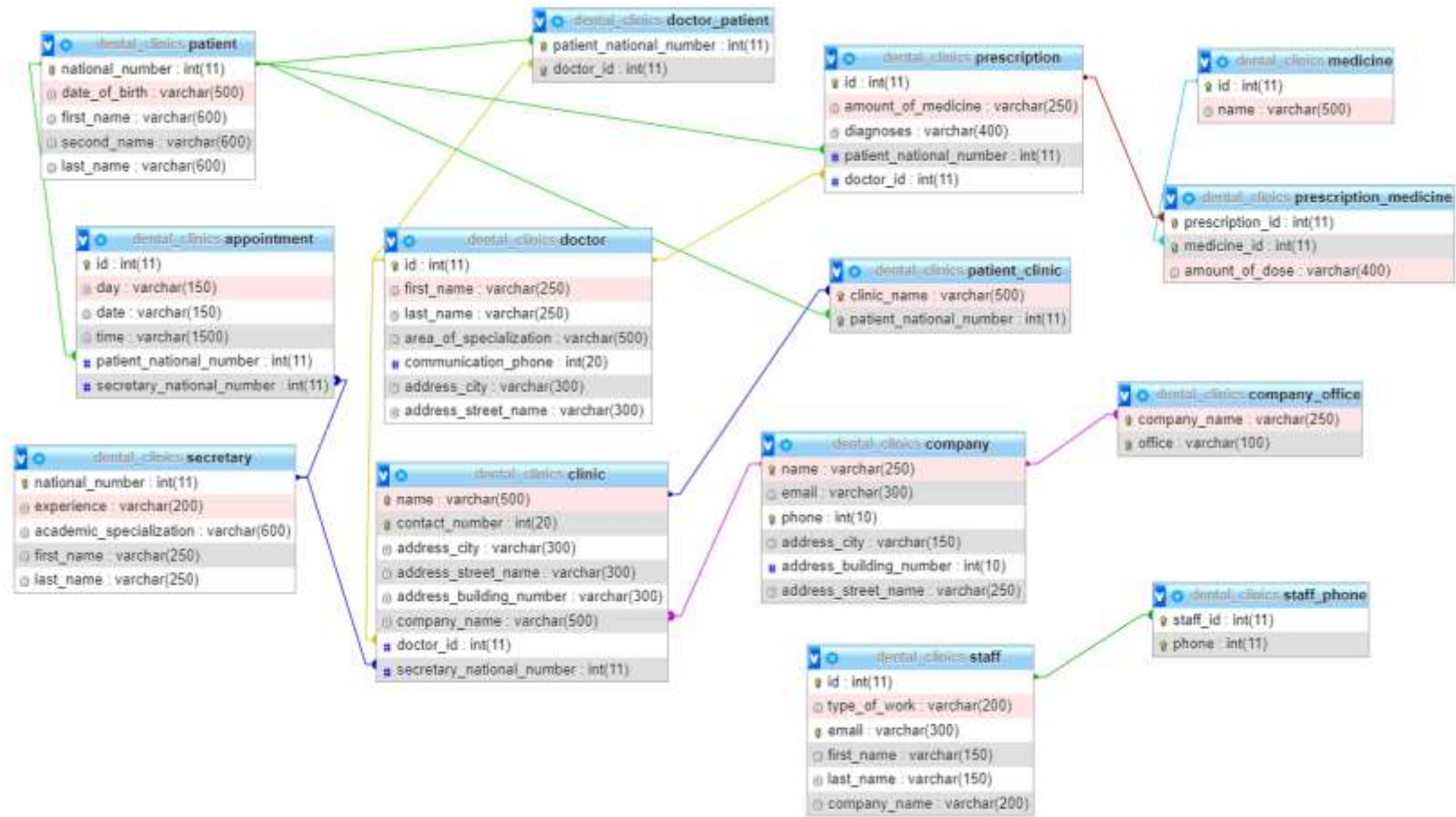
CONCEPTUAL



LOGICAL



PHYSICAL



MAPPING

Company: (Name, Email, Phone, Address_City, Address_Building_Number, Address_Street_Name)

Company_Office: (Company_Name, Office)

Staff: (Id, Type_of_work, Email, First_Name, Last_Name, Company_Name)

Staff_Phone: (Staff_Id, Phone)

Patient: (National_Number, Date_of_birth, First_Name, Second_Name, Last_Name)

Doctor: (Id, Area_of_Specialization, Communication_Phone, First_Name, Last_Name, Address_City, Address_Street_Name)

Doctor_Patient: (Patient_National_Number, Doctor_Id)

Prescription: (Id, Amount_of_medicine, Diagnoses, Patient_National_Number, Doctor_Id)

Medicine: (Id, Name)

Prescription_Medicine: (Prescription_Id, Medicine_Id, Amount_of_dose)

Secretary: (National_Number, Experience, Academic_Specialization, First_Name, Last_Name)

Clinic: (Name, Contact_Number, Address_City, Address_Street_Name, Address_Building_Number, Company_Name, Doctor_Id, Secretary_National_Number)

Patient_Clinic: (Clinic_Name, Patient_National_Number)

Appointment: (Id, Day, Date, Time, Patient_National_Number, Secretary_National_Number)

NORMALIZATION

FIRST NORMAL FORM

In the staff table I used the first normal form and the table was that: staff (Id, Type_of_work, Email, First_Name, Last_Name, Company_Name, phones)

Because there are a lot of members have more than one phone number and the phone attribute are a multivalued attribute, so in one table of-course there is redundant data and it wastes disk space and creates maintenance problems, so I made two tables, the first is:

Staff (Id, Type_of_work, Email, First_Name, Last_Name, Company_Name)

And the second table is: Staff_Phone (Staff_Id, Phone)

SECOND NORMAL FORM

I used the second normal form in the doctor and patient tables and that was: (Patient_National_Number, Patient_Date_of_birth, Patient_First_Name, Patient_Second_Name, Patient_Last_Name, Doctor_Id, Doctor_Area_of_Specialization, Doctor_Communication_Phone, Doctor_Frist_Name, Doctor_Last_Name, Doctor_Address_City, Doctor_Address_Street_Name)





































































There is a partial dependency in this table and to remove it I broke the relation into more than one table like this:

(Patient_National_Number, Patient_Date_of_birth, Patient_First_Name, Patient_Second_Name, Patient_Last_Name)

(Doctor_Id, Doctor_Area_of_Specialization, Doctor_Communication_Phone, Doctor_Frist_Name, Doctor_Last_Name, Doctor_Address_City, Doctor_Address_Street_Name)

(Patient_National_Number, Doctor_Id)

Options

			id	amount_of_medicine	diagnoses	patient_national_number	doctor_id		
<input type="checkbox"/>		 Edit	 Copy	 Delete	1	30 tablets	Inflammation	1561785	3
<input type="checkbox"/>		 Edit	 Copy	 Delete	2	20 capsules	Inflammation	1561785	3
<input type="checkbox"/>		 Edit	 Copy	 Delete	3	15 needles	Vitamin B12 deficiency	1616586	5
<input type="checkbox"/>		 Edit	 Copy	 Delete	4	30 tablets	Take off a tooth	1616586	5
<input type="checkbox"/>		 Edit	 Copy	 Delete	5	15 tablets	Inflammation	1616586	5
<input type="checkbox"/>		 Edit	 Copy	 Delete	6	16 tablets	Tooth decay	1616586	5
<input type="checkbox"/>		 Edit	 Copy	 Delete	7	30 tablets	Tooth decay	1951635	2
<input type="checkbox"/>		 Edit	 Copy	 Delete	8	20 tablets	Inflammation	1951635	2
<input type="checkbox"/>		 Edit	 Copy	 Delete	9	16 capsules	Inflammation	1951635	2
<input type="checkbox"/>		 Edit	 Copy	 Delete	10	20 capsules	Gum ulceration	1951635	2
<input type="checkbox"/>		 Edit	 Copy	 Delete	11	16 capsules	Gum ulceration	2005661	2
<input type="checkbox"/>		 Edit	 Copy	 Delete	12	one box	Gum pain	2005661	2
<input type="checkbox"/>		 Edit	 Copy	 Delete	13	30 tablets	Gum and head pain	2044979	4
<input type="checkbox"/>		 Edit	 Copy	 Delete	14	25 tablets of Spirazol	Gum ulceration	2044979	4
<input type="checkbox"/>		 Edit	 Copy	 Delete	15	25 tablets	Inflammation	4945882	1
<input type="checkbox"/>		 Edit	 Copy	 Delete	16	20 capsules	Tooth decay	4945882	1
<input type="checkbox"/>		 Edit	 Copy	 Delete	17	15 needles	Vitamin B12 deficiency	4945882	1

4. Medicine table

✓ 17 rows inserted. (Query took 0.0074 seconds.)

```
INSERT INTO medicine(id, name) VALUES (1, 'Panda'), (2, 'Lincodar'), (3, 'B12 vitamin'), (4, 'Analarg'), (5, 'Cromadol'), (6, 'Cetamol'), (7, 'Cetamol'), (8, 'Panadol'), (9, 'Lincodar'), (10, 'Scensazol'), (11, 'Scensazol'), (12, 'Adol'), (13, 'Adol'), (14, 'Spirazol'), (15, 'Rapidus'), (16, 'Lincodar'), (17, 'B12 vitamin')
```

[\[Edit inline\]](#) [\[Edit\]](#) [\[Create PHP code\]](#)

				id	name
<input type="checkbox"/>				1	Panda
<input type="checkbox"/>				2	Lincodar
<input type="checkbox"/>				3	B12 vitamin
<input type="checkbox"/>				4	Analarg
<input type="checkbox"/>				5	Cromadol
<input type="checkbox"/>				6	Cetamol
<input type="checkbox"/>				7	Cetamol
<input type="checkbox"/>				8	Panadol
<input type="checkbox"/>				9	Lincodar
<input type="checkbox"/>				10	Scensazol
<input type="checkbox"/>				11	Scensazol
<input type="checkbox"/>				12	Adol
<input type="checkbox"/>				13	Adol
<input type="checkbox"/>				14	Spirazol
<input type="checkbox"/>				15	Rapidus
<input type="checkbox"/>				16	Lincodar
<input type="checkbox"/>				17	B12 vitamin

5. Prescription_Medicine table

✓ 17 rows inserted. (Query took 0.0073 seconds.)

```
INSERT INTO prescription_medicine (prescription_id, medicine_id, amount_of_dose) VALUES (1,1,'one tablets after eating, three times by day'), (2,2,'two capsules after eating, three times by day'), (3,3,'one needle everyday'), (4,4,'one tablet before eating, three times by day'), (5,5,'one tablet after eating, two times by day'), (6,6,'one tablet after eating, if necessary'), (7,7,'one tablet after eating, if necessary'), (8,8,'one tablet after eating, if necessary'), (9,9,'two capsules after eating, three times by day'), (10,10,'one capsule before eating, once by day'), (11,11,'one capsule before eating, once by day'), (12,12,'30mm, three times by day'), (13,13,'30mm, Adol'), (14,14,'one tablet before eating, three times by day'), (15,15,'one tablet before eating, two times by day'), (16,16,'two capsules after eating, three times by day'), (17,17,'one needle
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

	prescription_id	medicine_id	amount_of_dose
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	1	one tablets after eating, three times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	2	two capsules after eating, three times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	3	one needle everyday
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	4	one tablet before eating, three times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	5	one tablet after eating, two times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	6	one tablet after eating, if necessary
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	7	7	one tablet after eating, if necessary
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	8	8	one tablet after eating, if necessary
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	9	9	two capsules after eating, three times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	10	10	one capsule before eating, once by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	11	11	one capsule before eating, once by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	12	12	30mm, three times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	13	13	30mm, Adol
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	14	14	one tablet before eating, three times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	15	15	one tablet before eating, two times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	16	16	two capsules after eating, three times by day
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	17	17	one needle everyday

6. Secretary table

✓ 5 rows inserted. (Query took 0.0065 seconds.)

```
INSERT INTO secretary (national_number, experience, academic_specialization, first_name, last_name) VALUES (202165465, 'Three years', 'Buisness Administration', 'Ali', 'Khualdeh'), (204984655, 'One year', 'Mechanical Engineering', 'Lara', 'AbuLawi'), (256461248, 'None', 'Marketing', 'Hazem', 'Rashaideh'), (985598952, 'Five years', 'Computer Science', 'Lama', 'Hmaidat'), (584562055, 'Three years', 'Medical Records', 'Aysheh', 'Samara')
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

+ Options




	national_number	experience	academic_specialization	first_name	last_name
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	202165465	Three years	Buisness Administration	Ali	Khualdeh
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	204984655	One year	Mechanical Engineering	Lara	AbuLawi
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	256461248	None	Marketing	Hazem	Rashaideh
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	985598952	Five years	Computer Science	Lama	Hmaidat
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	584562055	Three years	Medical Records	Aysheh	Samara

7. Doctor table

+ Options											
<div><div>←</div><div>→</div></div>					id	first_name	last_name	area_of_specialization	communication_phone	address_city	address_street_name
<input type="checkbox"/>				1	Abdel Hadi	Al-Aqrabawi	Jaw and dental surgery		5654161	Zarqa	Al-Karameh
<input type="checkbox"/>				2	Khaled	Al-Rasheed	Jaw and dental surgery		4848962	Irbid	Al-Thaqafeh
<input type="checkbox"/>				3	Mohammad	Al-Khaldi	Pediatric dentistry and orthodontics		79546132	Amman	Wasfi Altal
<input type="checkbox"/>				4	Bahaa	Abdallat	Pediatric dentistry and orthodontics		78543059	Zarqa	36 street
<input type="checkbox"/>				5	Mahmoud	Odeh	Jaw and dental surgery		77554354	Amman	Al-Rainbow

























8. Company Table

+ Options

		name	email	phone	address_city	address_building_number	address_street_name
<input type="checkbox"/>	 Edit  Copy  Delete	Eadat AL-Aqsa	al-aqsa@gmail.com	5484615	Amman	4	Almadenah street

9. Staff table

Options



















				id	type_of_work	email	first_name	last_name	company_name
<input type="checkbox"/>				1	developer	alialqasi@gmail.com	ali	al-qasi	Eadat_Al-Aqsa
<input type="checkbox"/>				2	developer	mohammadelayyan@gmail.com	mohammad	elayyan	Eadat_Al-Aqsa
<input type="checkbox"/>				3	security	khaledkhateeb@gmail.com	khaled	khateeb	Eadat_Al-Aqsa
<input type="checkbox"/>				4	IT support	moathabdallat@gmail.com	moath	abdallat	Eadat_Al-Aqsa
<input type="checkbox"/>				5	team leader	ahmadalomari@gmail.com	ahmad	al-omari	Eadat_Al-Aqsa
<input type="checkbox"/>				6	secretary	shahedalzoubi@gmail.com	shahed	al-zoubi	Eadat_Al-Aqsa
<input type="checkbox"/>				7	personnel affairs	malakalrosan@gmail.com	malak	al-rosan	Eadat_Al-Aqsa
<input type="checkbox"/>				8	accountant	lailahazem@gmail.com	laila	hazem	Eadat_Al-Aqsa

10. Staff_Phone table

+ Options		
← T →		
	staff_id	phone
<input type="checkbox"/>	1	77551515
<input type="checkbox"/>	1	78545111
<input type="checkbox"/>	1	79551561
<input type="checkbox"/>	2	77156161
<input type="checkbox"/>	2	79884123
<input type="checkbox"/>	3	78157812
<input type="checkbox"/>	4	79141616
<input type="checkbox"/>	4	79516516
<input type="checkbox"/>	5	511318
<input type="checkbox"/>	5	77113184
<input type="checkbox"/>	6	77651654
<input type="checkbox"/>	6	78412335
<input type="checkbox"/>	7	79465116
<input type="checkbox"/>	8	78400410

11. Patient table

+ Options

← T →				national_number	date_of_birth	first_name	second_name	last_name
<input type="checkbox"/>		 Edit	 Copy	1951635	17/5/1999	ali	mohammad	al-omari
<input type="checkbox"/>		 Edit	 Copy	2005661	5/1/1966	khaled	esam	al-rosan
<input type="checkbox"/>		 Edit	 Copy	1561785	20/3/1987	lena	mohammad	al-khateeb
<input type="checkbox"/>		 Edit	 Copy	1616586	25/8/2000	dareen	ahmad	hammad
<input type="checkbox"/>		 Edit	 Copy	4945882	4/12/1974	ahmad	mahmoud	al-najjar
<input type="checkbox"/>		 Edit	 Copy	2044979	17/5/2001	ali	hussien	ghazal

12. Clinic table

Show query box

✓ 7 rows inserted. (Query took 0.0017 seconds.)

```

INSERT INTO clinic (name, contact_number, address_city, address_street_name, address_building_number, company_name, doctor_id,
secretary_national_number) VALUES ('Dr. Adel Hadi Al-Aqrabwai Clinic Two', 067851364, 'Zarqa', '26 Street', 11, 'Eadat_Al-Aqsa', 1, 202165465),
('Dr. Khaled Al-Rasheed Clinic', 047252504, 'Irbid', 'Alqadseah', 5, 'Eadat_Al-Aqsa', 2, 204984655), ('Dr. Mohammad Al-Khalidi Clinic One',
052453545, 'Amman', 'Alshaab', 11, 'Eadat_Al-Aqsa', 3, 256461248), ('Dr. Mohammad Al-Khalidi Clinic Two', 034654132, 'Al-Balqaa', '60 Street', 18,
'Eadat_Al-Aqsa', 3, 204984655), ('Dr. Bahaa Abdallat Clinic one', 054984123, 'Amman', 'King The Second Abdullah', 1, 'Eadat_Al-Aqsa', 4, 985598952),
('Dr. Bahaa Abdallat Clinic Two', 062084172, 'zarqa', 'Algaish', 15, 'Eadat_Al-Aqsa', 4, 985598952), ('Dr. Mahmoud Odeh Clinic', 051651323, 'Amman',

```

[Edit inline] [Edit] [Create PHP code]

name	contact_number	address_city	address_street_name	address_building_number	company_name	doctor_id	secretary_national_number
Dr. Adel Hadi Al-Aqrabwai Clinic one	54641651	Amman	Makkah Street	8	Eadat_Al-Aqsa	1	202165465
Dr. Adel Hadi Al-Aqrabwai Clinic Two	67851364	Zarqa	26 Street	21	Eadat_Al-Aqsa	1	202165465
Dr. Khaled Al-Rasheed Clinic	47252504	Irbid	Alqadseah	5	Eadat_Al-Aqsa	2	204984655
Dr. Mohammad Al-Khalidi Clinic One	52453545	Amman	Alshaab	11	Eadat_Al-Aqsa	3	256461248
Dr. Mohammad Al-Khalidi Clinic Two	34654132	Al-Balqaa	60 Street	18	Eadat_Al-Aqsa	3	204984655
Dr. Bahaa Abdallat Clinic one	54984123	Amman	King The Second Abdullah	1	Eadat_Al-Aqsa	4	985598952
Dr. Bahaa Abdallat Clinic Two	62084172	zarqa	Algaish	15	Eadat_Al-Aqsa	4	985598952
Dr. Mahmoud Odeh Clinic	51651323	Amman	Alordon	23	Eadat_Al-Aqsa	5	584562055

13. Patient_Clinic table

+ Options

		clinic_name	patient_national_number
<input type="checkbox"/>	Edit Copy Delete	Dr. Mohammad Al-Khaldi Clinic One	1561785
<input type="checkbox"/>	Edit Copy Delete	Dr. Mahmoud Odeh Clinic	1616586
<input type="checkbox"/>	Edit Copy Delete	Dr. Abdel Hadi Al-Aqrabawi Clinic Two	1951635
<input type="checkbox"/>	Edit Copy Delete	Dr. Bahaa Abdallat Clinic Two	1951635
<input type="checkbox"/>	Edit Copy Delete	Dr. Khaled Al-Rasheed Clinic	2005661
<input type="checkbox"/>	Edit Copy Delete	Dr. Mohammad Al-Khaldi Clinic Two	2005661
<input type="checkbox"/>	Edit Copy Delete	Dr. Bahaa Abdallat Clinic One	2044979
<input type="checkbox"/>	Edit Copy Delete	Dr. Abdel Hadi Al-Aqrabawi Clinic One	4945882

14. Appointment table

✓ 6 rows inserted. (Query took 0.0018 seconds.)

```
INSERT INTO appointment(id, day, date, time, patient_national_number, secretary_national_number) VALUES (1, 'Tuesday', '3/9/2021', '03:00 PM', 4945882, 202165465), (2, 'Sunday', '8/10/2021', '12:25 PM', 1951635, 202165465), (3, 'Monday', '4/10/2021', '11:15 AM', 2044979, 985598952), (4, 'Wednesday', '7/9/2021', '01:10 PM', 2005661, 204984655), (5, 'Sunday', '1/10/2021', '03:45 PM', 1616586, 584562055), (6, 'Tuesday', '4/10/2021', '10:30 AM', 1561785, 256461248)
```

[\[Edit inline\]](#) [\[Edit\]](#) [\[Create PHP code\]](#)

id	day	date	time	patient_national_number	secretary_national_number
1	Tuesday	3/9/2021	03:00 PM	4945882	202165465
2	Sunday	8/10/2021	12:25 PM	1951635	202165465
3	Monday	4/10/2021	11:15 AM	2044979	985598952
4	Wednesday	7/9/2021	01:10 PM	2005661	204984655
5	Sunday	1/10/2021	03:45 PM	1616586	584562055
6	Tuesday	4/10/2021	10:30 AM	1561785	256461248

CREATE USERS AND GIVE PRIVILEGES + VIEW AND PROCEDURES

CREATE USERS

```
CREATE USER 'Manager of the clinic'@'localhost' IDENTIFIED BY '12345'
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
CREATE USER 'Manager of the company'@'localhost' IDENTIFIED BY '12345'
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)

```
CREATE USER 'Patient'@'localhost' IDENTIFIED BY '12345'
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
CREATE USER 'Doctor'@'localhost' IDENTIFIED BY '12345'
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
CREATE USER 'Secretary'@'localhost' IDENTIFIED BY '12345'
```

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
CREATE USER 'Staff'@'localhost' IDENTIFIED BY '12345'
```

GIVE PRIVILEGES

1. MANAGER OF THE COMPANY USER

Your SQL query has been executed successfully.

```
SHOW GRANTS FOR 'Manager of the company'@'localhost'
```

+ Options

Grants for **Manager of the company@localhost**

```
GRANT ALL PRIVILEGES ON *.* TO 'Manager of the company'@'localhost'
```

2. MANAGER OF THE CLINIC USER

```

✓ MySQL returned an empty result set (i.e. zero rows) (Query took 0.0015 seconds)
GRANT ALL PRIVILEGES ON dental_clinics.patient TO 'Manager of the clinic'@'localhost'
[Edit inline] [Edit] [Create PHP code]

✓ MySQL returned an empty result set (i.e. zero rows) (Query took 0.0006 seconds)
GRANT ALL PRIVILEGES ON dental_clinics.doctor_patient TO 'Manager of the clinic'@'localhost'
[Edit inline] [Edit] [Create PHP code]

✓ MySQL returned an empty result set (i.e. zero rows) (Query took 0.0003 seconds)
GRANT ALL PRIVILEGES ON dental_clinics.medicine TO 'Manager of the clinic'@'localhost'
[Edit inline] [Edit] [Create PHP code]

✓ MySQL returned an empty result set (i.e. zero rows) (Query took 0.0002 seconds)
GRANT ALL PRIVILEGES ON dental_clinics.prescription TO 'Manager of the clinic'@'localhost'
[Edit inline] [Edit] [Create PHP code]

✓ MySQL returned an empty result set (i.e. zero rows) (Query took 0.0002 seconds)

```

Your SQL query has been executed successfully.

```
SHOW GRANTS FOR 'Manager of the clinic'@'localhost'
```

+ Options

Grants for Manager of the clinic@localhost

```

GRANT USAGE ON *.* TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`clinic` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`patient` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`prescription` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`secretary` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`doctor` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`appointment` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`medicine` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`prescription_medicine` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`patient_clinic` TO 'Manager of the clinic'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`doctor_patient` TO 'Manager of the clinic'@'localhost'

```

3. PATIENT USER

Grants for Patient@localhost

```

GRANT USAGE ON *.* TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`medicine` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`patient` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`appointment` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`prescription_medicine` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`prescription` TO 'Patient'@'localhost'

```

4. DOCTOR USER

Grants for Doctor@localhost

```
GRANT USAGE ON *.* TO 'Doctor'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`prescription` TO 'Doctor'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`doctor` TO 'Doctor'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`medicine` TO 'Doctor'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`appointment` TO 'Doctor'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`prescription_medicine` TO 'Doctor'@'localhost'
```

5. SECRETARY USER

Grants for Secretary@localhost

```
GRANT USAGE ON *.* TO 'Secretary'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`patient` TO 'Secretary'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`medicine` TO 'Secretary'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`secretary` TO 'Secretary'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`prescription` TO 'Secretary'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`appointment` TO 'Secretary'@'localhost'
```

```
GRANT SELECT, INSERT, UPDATE, DELETE ON `dental_clinics`.`prescription_medicine` TO 'Secretary'@'localhost'
```

6. STAFF USER

Grants for Staff@localhost

```
GRANT USAGE ON *.* TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`staff` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`doctor` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`patient` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`medicine` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`company_office` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`patient_clinic` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`doctor_patient` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`clinic` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`secretary` TO 'Staff'@'localhost'
```

```
GRANT ALL PRIVILEGES ON `dental_clinics`.`staff_phone` TO 'Staff'@'localhost'
```


PROCEDURES

1. MANAGER OF THE CLINIC PROCEDURE

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0141 seconds.)

```
CREATE PROCEDURE manager_of_the_clinic_view2 (IN clinic_name VARCHAR(200)) SELECT doctor_id, address_building_number, address_city, address_street_name, secretary_national_number FROM clinic WHERE name = clinic_name
```

[\[Edit inline\]](#) [\[Edit\]](#) [\[Create PHP code\]](#)

2. MANAGER OF THE COMPANY PROCEDURE

Routine name	manager_of_the_company_view				
Type	PROCEDURE				
	Change to FUNCTION				
Parameters	Direction	Name	Type	Length/Values	Options
	Add parameter				
	Remove last parameter				
Definition	<pre>SELECT patient_clinic.clinic_name, patient_clinic.patient_national_number, clinic.address_city, clinic.address_street_name, clinic.address_building_number FROM patient_clinic INNER JOIN clinic ON patient_clinic.clinic_name = clinic.name</pre>				

3. MEDICINE NAMES PROCEDURE

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0034 seconds.)

```
CREATE PROCEDURE medicine_names (IN medicine_id INT) SELECT name FROM medicine WHERE id = medicine_id
```

[\[Edit i](#)

4. PATIENT PROCEDURE

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0042 seconds.)

```
CREATE PROCEDURE patient_view1 (IN appointment_id INT) SELECT date, day, time FROM appointment WHERE id = appointment_id
```

[\[Edit inline\]](#) [\[Edit\]](#) [\[Create PHP code\]](#)

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0025 seconds.)

```
CREATE PROCEDURE patient_view2 (IN prescription_id INT) SELECT amount_of_medicine, diagnoses FROM prescription WHERE id = prescription_id
```

[\[Edit inline\]](#) [\[Edit\]](#) [\[Create PHP code\]](#)

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0007 seconds.)

```
CREATE PROCEDURE patient_view3 (IN prescription_medicine_id INT) SELECT amount_of_dose FROM prescription_medicine WHERE prescription_id = prescription_medicine_id
```

[\[Edit inline\]](#) [\[Edit\]](#) [\[Create PHP code\]](#)

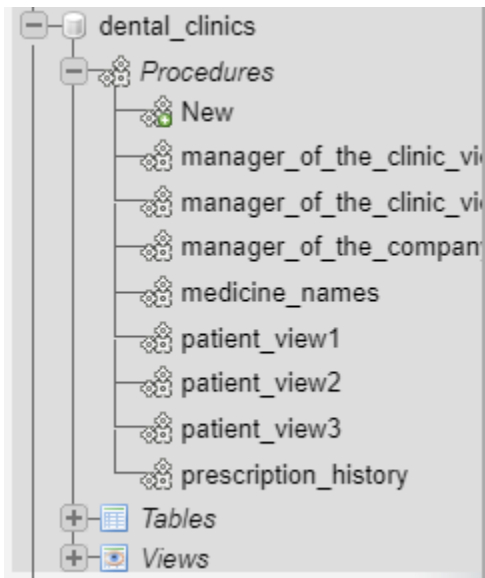
5. PRESCRIPTION HISTORY PROCEDURE

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0012 seconds.)

```
CREATE PROCEDURE prescription_history (IN prescription_id INT) SELECT diagnoses FROM prescription WHERE id = prescription_id
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create F](#)

Call of procedure:



✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0001 seconds.)

```
SET @clinic_name= 'Dr. Bahaa Abdallat Clinic One'
```

✓ Showing rows 0 - 0 (1 total. Query took 0.0009 seconds.)

```
CALL manager_of_the_clinic_view2(@clinic_name)
```

☐ Show all | Number of rows: 25 | Filter rows:

+ Options

doctor_id	address_building_number	address_city	address_street_name	secretary_national_number
4	1	Amman	King The Second Abdullah	985598952

VIEW

1. THE MANAGER OF THE COMPANY VIEW

clinic_name	patient_national_number	address_city	address_street_name	address_building_number
Dr. Mohammad Al-Khaldi Clinic One	1561785	Amman	Alshaab	11
Dr. Mahmoud Odeh Clinic	1616586	Amman	Alordon	23
Dr. Bahaa Abdallat Clinic Two	1951635	zarqa	Algaish	15
Dr. Khaled Al-Rasheed Clinic	2005661	Irbid	Alqadseah	5
Dr. Mohammad Al-Khaldi Clinic Two	2005661	Al-Balqaa	60 Street	18
Dr. Bahaa Abdallat Clinic One	2044979	Amman	King The Second Abdullah	1

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0216 seconds.)

```
CREATE VIEW patient_clinic_information AS SELECT patient_clinic.clinic_name, patient_clinic.patient_national_number, clinic.address_city, clinic.address_street_name, clinic.address_building_number FROM patient_clinic INNER JOIN clinic ON patient_clinic.clinic_name = clinic.name
```

[\[Edit inline\]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

2. THE MANAGER OF THE CLINIC VIEW

```
CREATE VIEW manager_of_the_clinic_one AS SELECT * FROM appointment
```

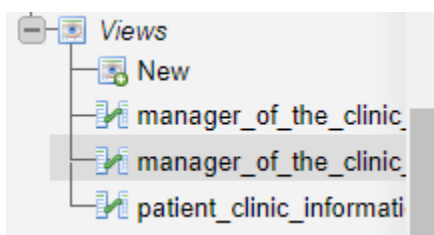
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0056 seconds.)

```
CREATE VIEW manager_of_the_clinic_two AS SELECT doctor_id, address_building_number, address_city, address_street_name, secretary_national_number FROM clinic
```

[\[Edit inline\]](#) [\[Edit\]](#) [\[Create PHP code\]](#)

id	day	date	time	patient_national_number	secretary_national_number
1	Tuesday	3/9/2021	03:00 PM	4945882	202165465
2	Sunday	8/10/2021	12:25 PM	1951635	202165465
3	Monday	4/10/2021	11:15 AM	2044979	985598952
4	Wednesday	7/9/2021	01:10 PM	2005661	204984655
5	Sunday	1/10/2021	03:45 PM	1616586	584562055
6	Tuesday	4/10/2021	10:30 AM	1561785	256461248

doctor_id	address_building_number	address_city	address_street_name	secretary_national_number
1	8	Amman	Makkah Street	202165465
1	21	Zarqa	26 Street	202165465
4	1	Amman	King The Second Abdullah	985598952
4	15	zarqa	Algaish	985598952
2	5	Irbid	Alqadseah	204984655
5	23	Amman	Alordon	584562055
3	11	Amman	Alshaab	256461248
3	18	Al-Balqaa	60 Street	204984655



TECHNICAL DOCUMENTATION

THE SCENARIO

In the introduction I mentioned the nature of the work that I have to do which is to create a database system for a dental clinic company and then I analyzed the tables that should be created and started from the main element which is the company and I analyzed its data from the name, address, phone number, email and offices inside it and then moved to the staff of this company and analyzed their data, name, id, email, phone numbers, etc., and I repeated the process on the schedule of the doctor and the patient and the prescriptions and appointments And the medicine and the secretary, but they have to be connected.

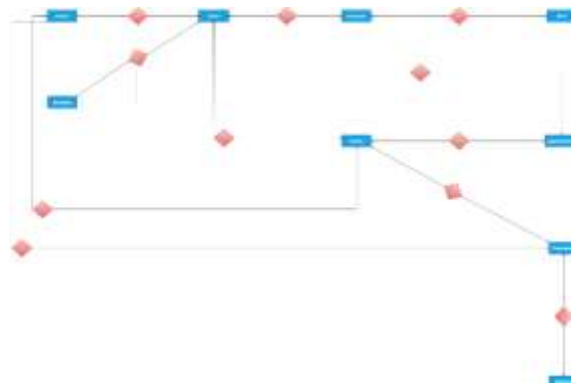
The doctor is the one who treats the patient and the patient can go to more than one doctor and get more than one prescription, and the secretary works in more than one clinic and the doctor has more than one clinic within the company, and also that the medicine is given to the patient, certainly must link her relationship with the patient and has completed the work in this context, details were explained in the previously mentioned scenario part.

BUSINESS NEEDS & USER GROUPS

Here you must write who users will use the database system and what roles and places they can access within the database and the result was that the staff has access to the drug information for each clinic and staff information and solve technical problems and the role of the secretary by booking appointments and adding patient information to the system and the ability to reach the doctor on the system that he can read the patient's information, sick history and date of visits to the clinic and that the patient also has an important role on the system which is to see the previous and subsequent appointments and his sick history and also the director of the clinic has a role on the system to see the days when the number of patients visits to the clinic is increased so that he knows how many doctors should be inside the clinic, and the director of the company has all the powers on all tables and to know the total number of patients for each clinic with its characteristics, details were explained in the previously mentioned user groups & business needs part.

ER DIAGRAM

1. **CONCEPTUAL SCHEMA** we have to do a blueprint or diagram for relationships, tables, and each table is represented by something called entity, that the entity gives it a rectangular shape and that the relationship gives it a diamond shape and for the many relationships the biggest signal (<) is placed with a beggar in the middle (—<=)



-

-
- The graph illustrates the following nodes and their internal components:
- Node 0:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 1:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 2:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 3:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 4:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 5:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 6:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 7:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 8:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 9:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
 - Node 10:** Contains `return_value = 0`, `if (0 == 0)`, `return_value = 0`, `return_value = 0`, `return_value = 0`, `return_value = 0`.
- The graph shows a complex web of dependencies between these code blocks, with arrows indicating the flow of data and control.

MAPPING

After creating the E-R diagram, these drawings must be represented in the form of written tables and then created on phpMyAdmin and to create written tables we schedule each entity and write the elements in them, starting with primary key and ending with foreign key if it exists and putting all the attribute between them, but the multivalued attribute requires a table alone and complex attribute also if there is and also the relationship many to require a table alone that connects the two tables and places the attributes as primary key and foreign key to, if there is an attribute placed on the relationship itself, we add it to this table but without placing it as primary key and foreign key, like that:

```

Company: (Name, Email, Phone, Address_City, Address_Building_Number, Address_Street_Name)
Company_Office: (Company_Name, Office)
Staff: (Id, Type_of_work, Email, First_Name, Last_Name, Company_Name)
Staff_Phone: (Staff_Id, Phone)
Patient: (National_Number, Date_of_birth, First_Name, Second_Name, Last_Name)
Doctor: (Id, Area_of_Specialization, Communication_Phone, Frist_Name, Last_Name, Address_City, Address_Street_Name)
Doctor_Patient: (Patient_National_Number, Doctor_Id)
Prescription: (Id, Amount_of_medicine, Diagnoses, Patient_National_Number, Doctor_Id)
Medicine: (Id, Name)
Prescription_Medicine: (Prescription_Id, Medicine_Id, Amount_of_dose)
Secretary: (National_Number, Experience, Academic_Specialization, First_Name, Last_Name)
Clinic: (Name, Contact_Number, Address_City, Address_Street_Name, Address_Building_Number, Company_Name, Doctor_Id, Secretary_National_Number)
Patient_Clinic: (Clinic_Name, Patient_National_Number)
Appointment: (Id, Day, Date, Time, Patient_National_Number, Secretary_National_Number)
  
```

NORMALIZATION

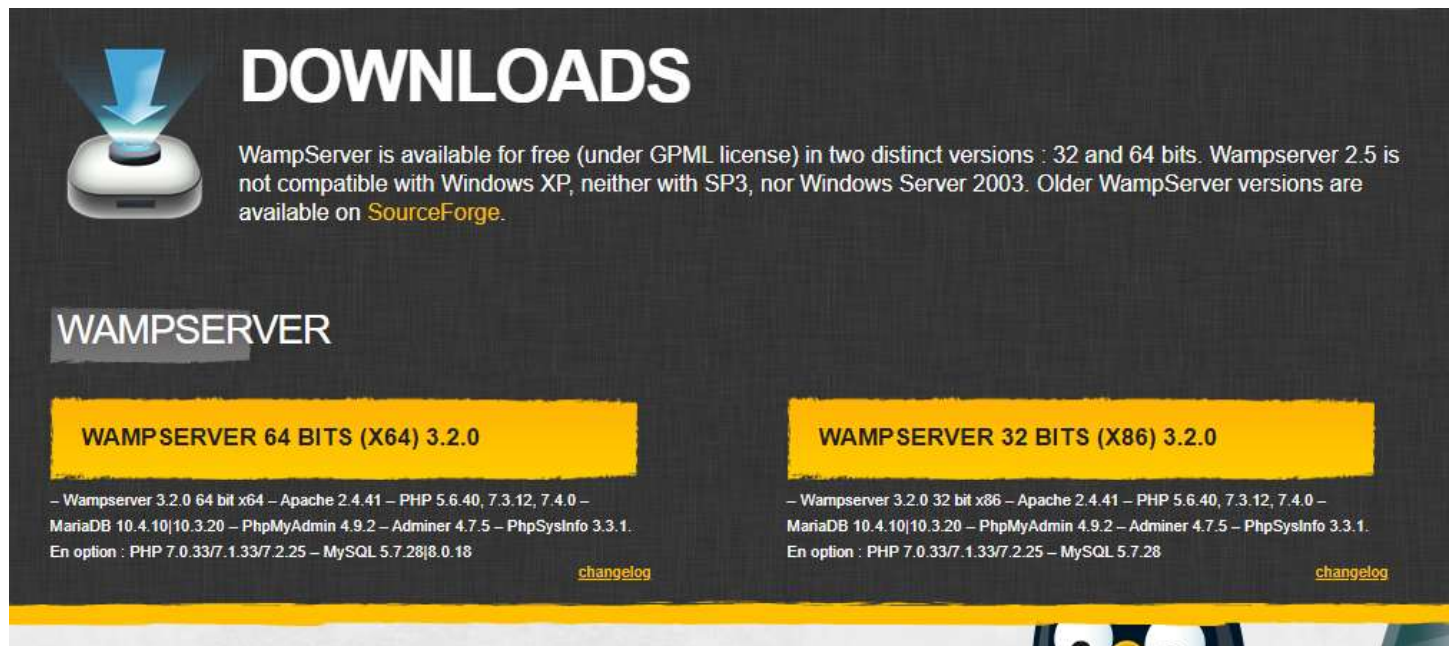
- 1) **FIRST NORMAL FORM:** In the staff table I used the first normal form and the table was that: staff (Id, Type_of_work, Email, First_Name, Last_Name, Company_Name, phones) Because there are a lot of members have more than one phone number and the phone attribute are a multivalued attribute, so in one table of-course there is redundant data and it wastes disk space and creates maintenance problems, so I made two tables,
 the first is: Staff (Id, Type_of_work, Email, First_Name, Last_Name, Company_Name)
 And the second table is: Staff_Phone (Staff_Id, Phone)
- 2) **SECOND NORMAL FORM:** I used the second normal form in the doctor and patient tables and that was:
 (Patient_National_Number, Patient_Date_of_birth, Patient_First_Name, Patient_Second_Name, Patient_Last_Name, Doctor_Id, Doctor_Area_of_Specialization, Doctor_Communication_Phone, Doctor_Frist_Name, Doctor_Last_Name, Doctor_Address_City, Doctor_Address_Street_Name) There is a partial dependency in this table and to remove it I broke the relation into more than one table like this:
 (Patient_National_Number, Patient_Date_of_birth, Patient_First_Name, Patient_Second_Name, Patient_Last_Name)
 (Doctor_Id, Doctor_Area_of_Specialization, Doctor_Communication_Phone, Doctor_Frist_Name, Doctor_Last_Name, Doctor_Address_City, Doctor_Address_Street_Name)

(Patient_National_Number, Doctor_Id)

INSTALL WAMP SERVER AND LOG IN TO PHPMYADMIN

To install Wamp server go with these steps:

1. Download the Wamp server: Go to the official website <http://www.wampserver.com/en/> and download the WampServer setup. There are two versions of WampServer are available i.e. 64-bits (x64) and 32-bits (x86), choose according to your computer's configuration



The image shows the 'DOWNLOADS' section of the WampServer website. It features a large blue arrow pointing down into a white bowl-like shape. Below this, the text states: 'WampServer is available for free (under GPML license) in two distinct versions : 32 and 64 bits. Wampserver 2.5 is not compatible with Windows XP, neither with SP3, nor Windows Server 2003. Older WampServer versions are available on [SourceForge](#).' Below this text, there are two yellow boxes for 'WAMP SERVER 64 BITS (X64) 3.2.0' and 'WAMP SERVER 32 BITS (X86) 3.2.0'. Each box lists the included software: Wampserver 3.2.0, Apache 2.4.41, PHP 5.6.40, 7.3.12, 7.4.0, MariaDB 10.4.10|10.3.20, PhpMyAdmin 4.9.2, Adminer 4.7.5, and PhpSysInfo 3.3.1. It also lists optional versions: PHP 7.0.33/7.1.33/7.2.25 and MySQL 5.7.28|8.0.18. A 'changelog' link is provided for each version.

Once you click on the download option, a popup will appear showing some warnings. Just don't worry about these warnings instead of clicking on the "Download Directly" link as shown below and proceed with the download process

DOWNLOAD WAMP SERVER 64 BITS (X64) 3.2.0

WampServer est disponible gratuitement (sous licence GPL). Vous pouvez remplir ce formulaire qui nous permettra de vous faire parvenir les actualités formation d'Alter Way société éditrice, ainsi que toutes les informations liées aux évolutions de WampServer. Si vous ne le souhaitez pas, vous pouvez [you can download it directly](#).

Prénom :

Nom :

Société :

Email (*) :

Téléphone :

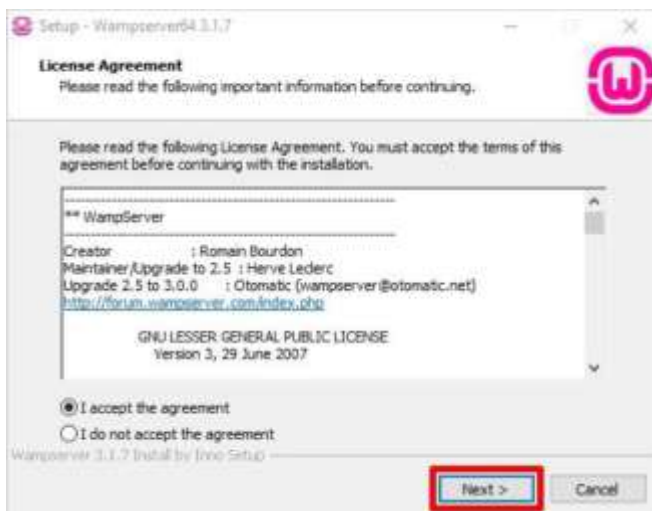
Pays :

Fonction (*) :

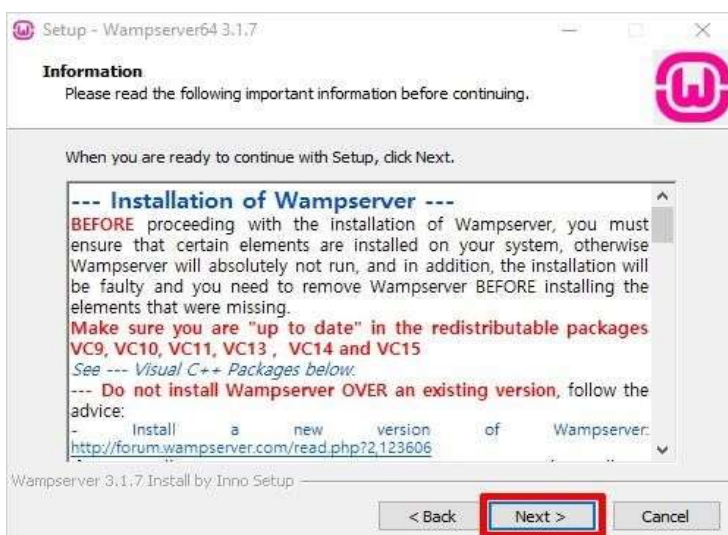
2. Initiate WAMP Server Install Process: Soon after you click on the downloaded file, you will be asked to choose your preferred language and click the “Ok” button. As I am choosing English here. See below.



The next screen you will see is about the license agreement. Click on the “I accept the agreement” radio button and then the “Next” button to continue with the installation shown below.

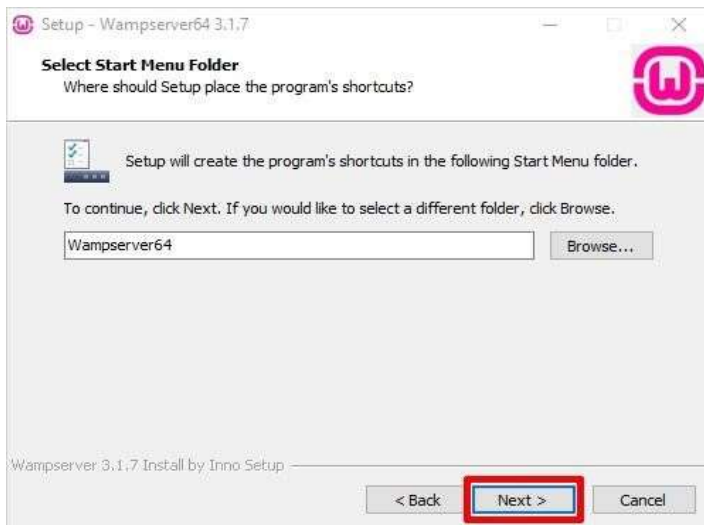


The next screen will inform you about the required components that have to be present in your computer system for the proper functioning of the WampServer. The main purpose of this step is to check for the suitable version of Microsoft VC++ redistributable package. Click on the ‘Next’ to continue.

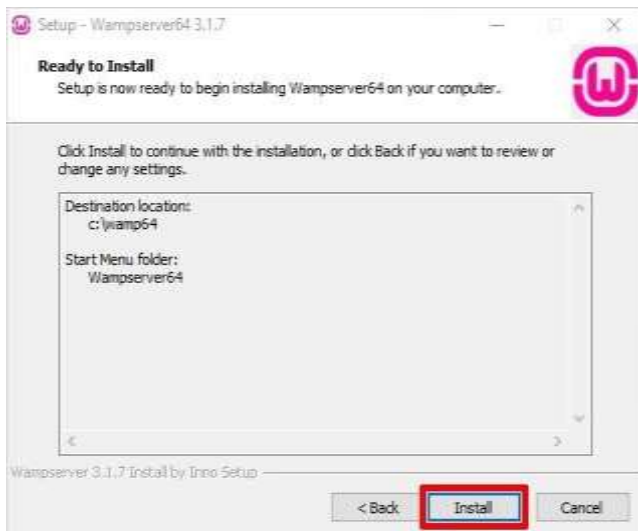


3. Select Location/Destination to Install WAMP: Here, you need to select the location to install the WAMP on your computer. However, you can accept the default location and move ahead. To continue with the installation hit the 'Next' button.

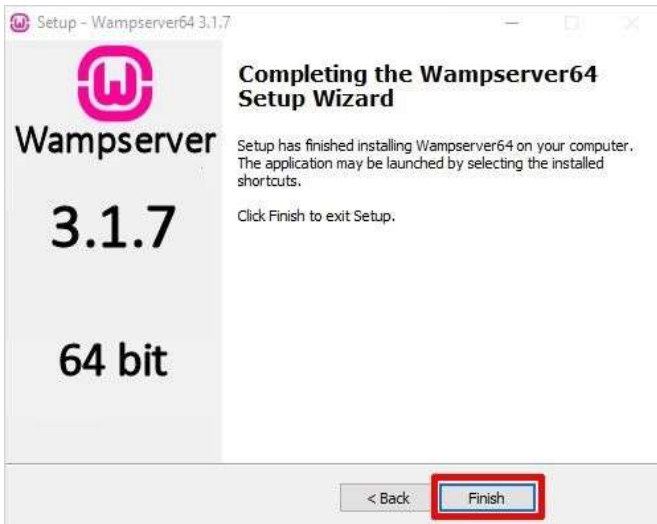
4. Now, you need to select the folder where you wish to create the program's shortcut. You can select any folder of your choice or you can continue with the default option. You can easily access this folder from the Windows start button. Choose the folder and click 'Next' to continue



5. Ready to install WAMP: Finally, you would see a ready to install wizard with a ready setup to begin the installation. Just hit the 'Install' button to begin the installation procedure.



6. WAMP installation complete: The installation is almost done now simply click 'Finish' to exit the setup.



After that go to the local server since become green and click on phpMyAdmin to go to the website of it and log in by default in username "root" and there is no password so it stays empty and click go

TECHNICAL SUPPORT

In any problem or explain or help contact with this email for a technical support: mahmoudrmn@gmail.com

USER DOCUMENTATION

THE SCENARIO

This company has many clinics, patients and doctors and this **company** has name, address (city, street name and building number), phone, email and offices. This company has many staffs and each **staff** has: name (first name and last name), Id, email, phones and type of work. Each **clinic** has name, address (city, street name and building number), contact number. Each clinic has one doctor and one secretary but the doctor and the secretary can work in more than one clinic, and each doctor can take care of more than one patient and the patient can go on more than one doctor and one secretary, the database keeps each **doctor's** information including: name (first name and last name), address (city and street name), communication phone, area of specialization and Id. **Patient** information is also maintained by the database system such as: name (first name, second name and last name), address (city, street name and building number), date of birth, age, national number. Each patient has **appointments** in: date, day, time and Id. Each patient has prescriptions was written by the doctor, the doctor can write more than one prescription and each **prescription** has: Id, amount of medicine and diagnoses, each prescription has many medicines, each medicine can be in more than one prescription and it has amount of dose and each **medicine** has: name and Id. The patient can schedule and cancel appointments and order prescription through the clinic's contact number by secretary and the secretary can schedule and cancel more than one appointment. The **secretary** has information such as: name (first name and last name), national number, academic specialization and experience.

USER GROUPS & BUSINESS NEEDS

- 1. Staff:** Seeing and solving the technical problems in the system in all clinics, seeing the information of the medicines for each clinic and the number of it, taking over the affairs of employees in terms of working hours and editing for their personal information and so on
- 2. Secretary:** Booking appointments and adding patient's information to the system
- 3. Doctor:** Read the patient's medical history and the date of his visits to the clinic to see the surgeries or procedures he has performed in the past, so that the doctor avoids any things that may negatively affect the patient's health
- 4. Patient:** See his upcoming and previous appointment information, his medical history and the medications he should take through the prescription
- 5. Manager of the clinic:** See the weekdays with the highest number of appointments so that he takes some decisions about the number of doctors in the same clinic and organize their working hours
- 6. Manager of the company:** See the information of all clinics within the company and the employees who work within this company in terms of the most visited clinics by patients and the information of each clinic in terms of real estate, location, licenses, tax, and periodic maintenance of it

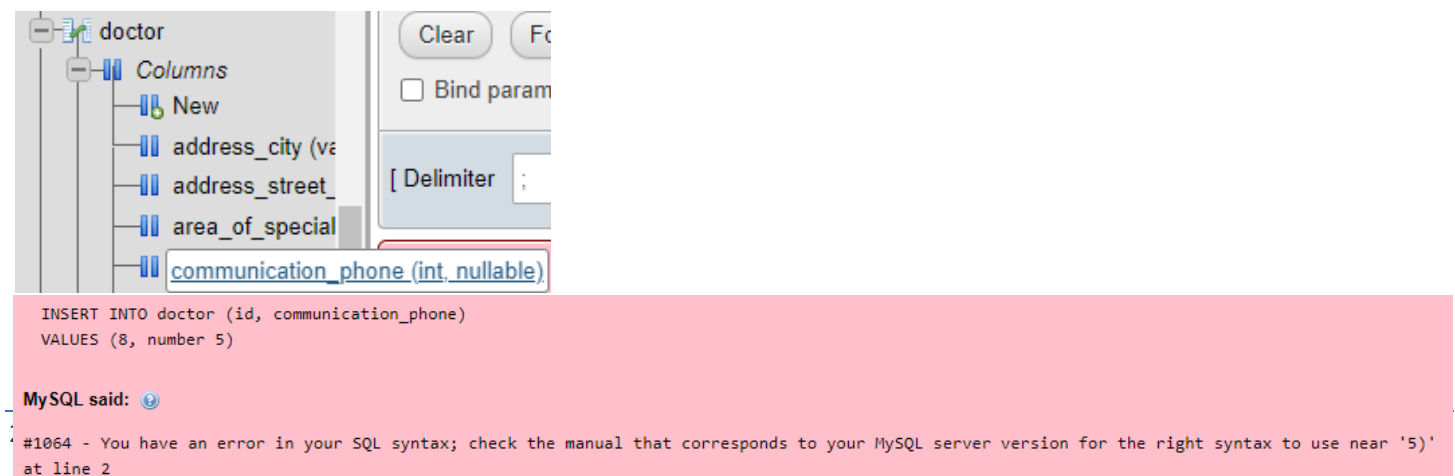
USER SUPPORT

In any problem or explain or help contact with this email for a user support: mahmoudrmn@gmail.com


TESTING

DATA VALIDATION

1. DATA TYPE




```
INSERT INTO doctor (id, communication_phone)
VALUES (8, number 5)
```

MySQL said: 

#1064 - You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '5)' at line 2

```
INSERT INTO doctor (id, communication_phone)
VALUES (1, 1646456)
```

MySQL said: 

#1062 - Duplicate entry '1' for key 'PRIMARY'

3. PROCEDURE

✓ MySQL returned an empty result set (i.e. zero rows) (Query took 0.0001 seconds)

```
SET @clinic_name= 'Dr. Bahaa Abdallat Clinic One'
```

✓ Showing rows 0 - 0 (1 total, Query took 0.0009 seconds)

```
CALL manager_of_the_clinic_view2(@clinic_name)
```

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

doctor_id	address_building_number	address_city	address_street_name	secretary_national_number
4	1	Amman	King The Second Abdullah	985598952

4. VIEW



















✓ Showing rows 0 - 5 (6 total, Query took 0.0018 seconds)

```
SELECT * FROM patient_clinic_information
```

☐ Profiling [\[Edit inline\]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Re \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

				clinic_name	patient_national_number	address_city	address_street_name	address_building_number
<input type="checkbox"/>	 Edit	 Copy	 Delete	Dr. Mohammad Al-Khalidi Clinic One	1561785	Amman	Alshaab	11
<input type="checkbox"/>	 Edit	 Copy	 Delete	Dr. Mahmoud Odeh Clinic	1616586	Amman	Alordon	23
<input type="checkbox"/>	 Edit	 Copy	 Delete	Dr. Bahaa Abdallat Clinic Two	1951635	zarqa	Algaish	15
<input type="checkbox"/>	 Edit	 Copy	 Delete	Dr. Khaled Al-Rasheed Clinic	2005661	Irbid	Alqadseah	5
<input type="checkbox"/>	 Edit	 Copy	 Delete	Dr. Mohammad Al-Khalidi Clinic Two	2005661	Al-Balqaa	60 Street	18
<input type="checkbox"/>	 Edit	 Copy	 Delete	Dr. Bahaa Abdallat Clinic One	2044979	Amman	King The Second Abdullah	1

5. SELECT

Your SQL query has been executed successfully.

```
SELECT COUNT(amount_of_medicine), patient_national_number FROM prescription WHERE patient_national_number = 1616586
```

☐ Profiling [Edit inline] [Edit] [

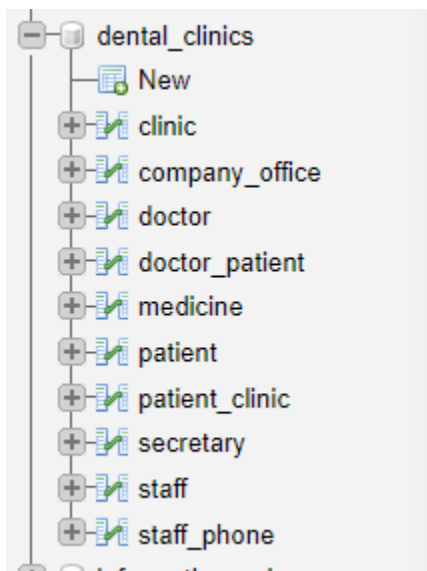
+ Options

COUNT(amount_of_medicine)	patient_national_number
4	1616586

Query results operations

6. USERS PRIVILEGES

STAFF USER

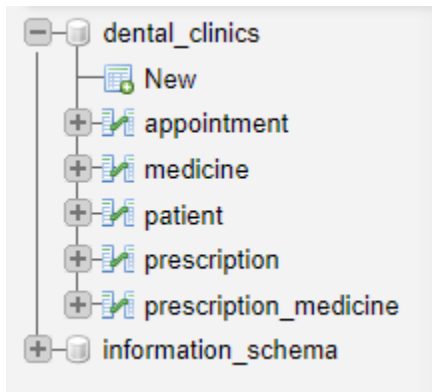


Grants for Staff@localhost

```

GRANT USAGE ON *.* TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`staff` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`doctor` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`patient` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`medicine` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`company_office` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`patient_clinic` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`doctor_patient` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`clinic` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`secretary` TO 'Staff'@'localhost'
GRANT ALL PRIVILEGES ON `dental_clinics`.`staff_phone` TO 'Staff'@'localhost'
  
```

PATIENT USER



Grants for Patient@localhost

```

GRANT USAGE ON *.* TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`medicine` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`patient` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`appointment` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`prescription_medicine` TO 'Patient'@'localhost'
GRANT SELECT ON `dental_clinics`.`prescription` TO 'Patient'@'localhost'
  
```