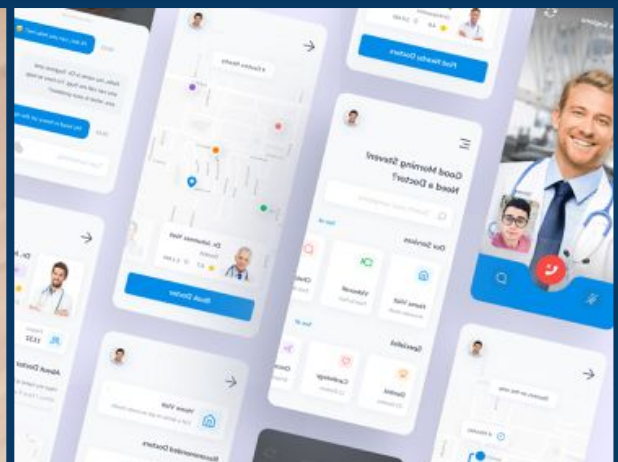
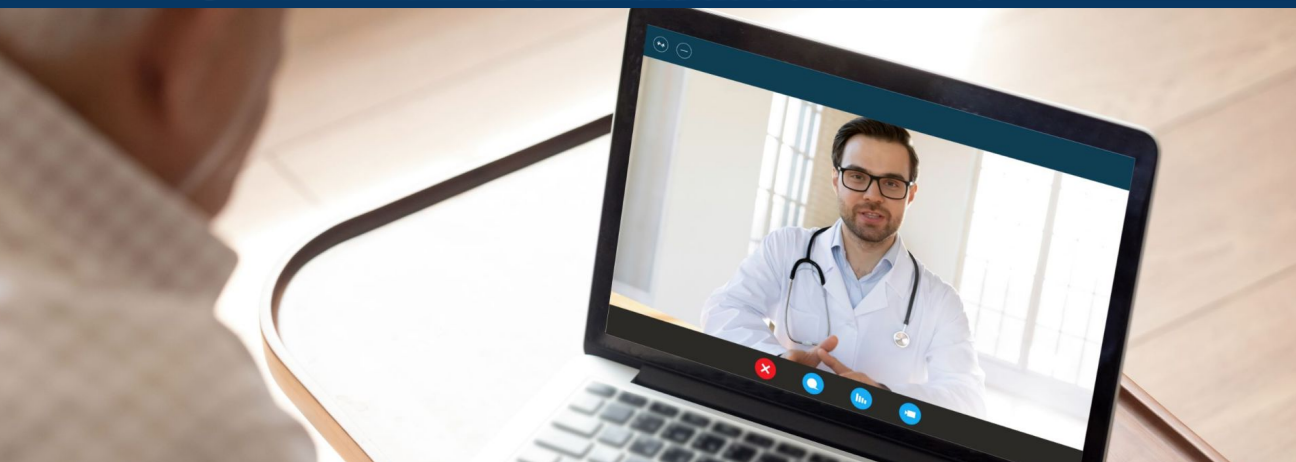


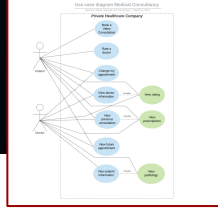


# MedConline

Video-consultation Database



# Index



UML Use  
case  
diagram

Data  
normalization

Pathology		
ID_Pathology	Name	Type
1	Migraine	Neuropathology
2	Tachycardia	Cardiopathology
3	Diabetes type II	Obesity
Patient&Pathology		
ID_patient	ID_Pathology	
6	1	
7	2	
2	3	

Second step

Third step

Fourth step

THE END!

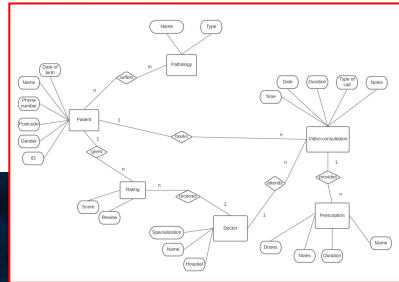
First step

E-R  
Diagram

DDL  
in SQL

Database  
interface

CREATE  
&  
INSERT



```
1 CREATE TABLE patient (  
2 id_patient INTEGER PRIMARY KEY AUTOINCREMENT,  
3 name TEXT NOT NULL,  
4 gender TEXT,  
5 date of birth DATE NOT NULL,  
6 id TEXT NOT NULL UNIQUE,  
7 phone number TEXT UNIQUE,  
8 postcode TEXT  
9 )
```

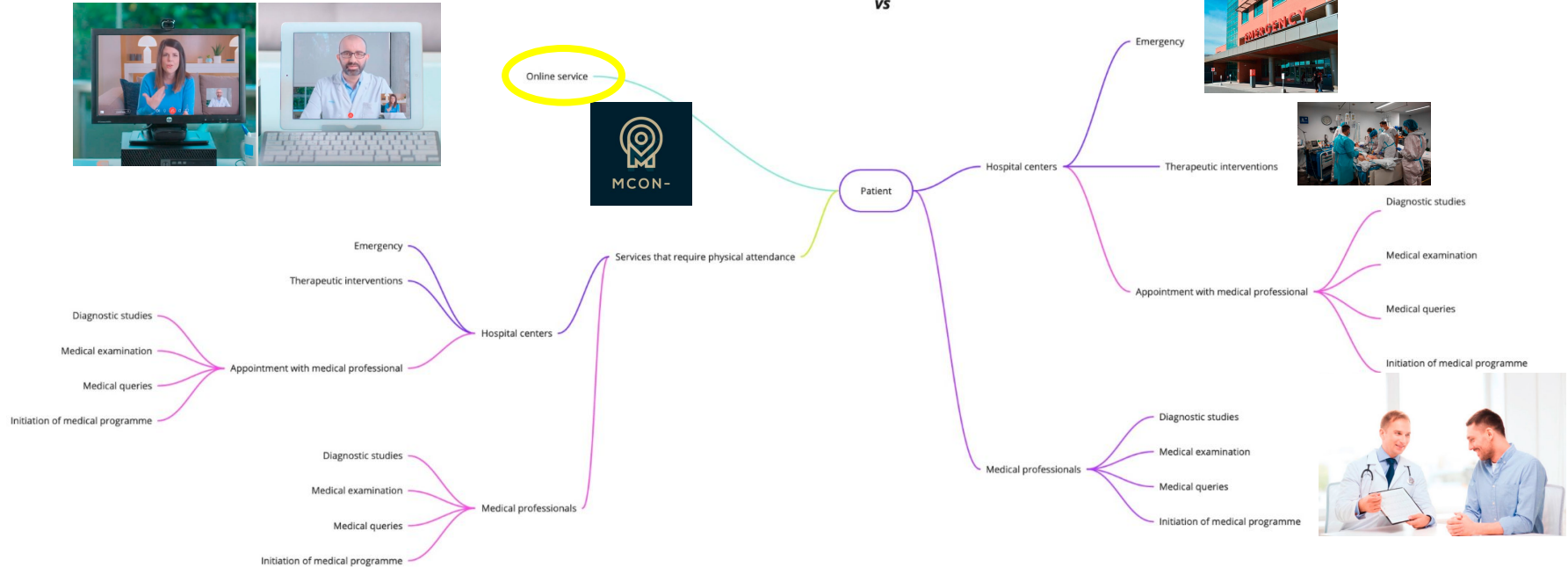
miro

# Why do we need MedConline?

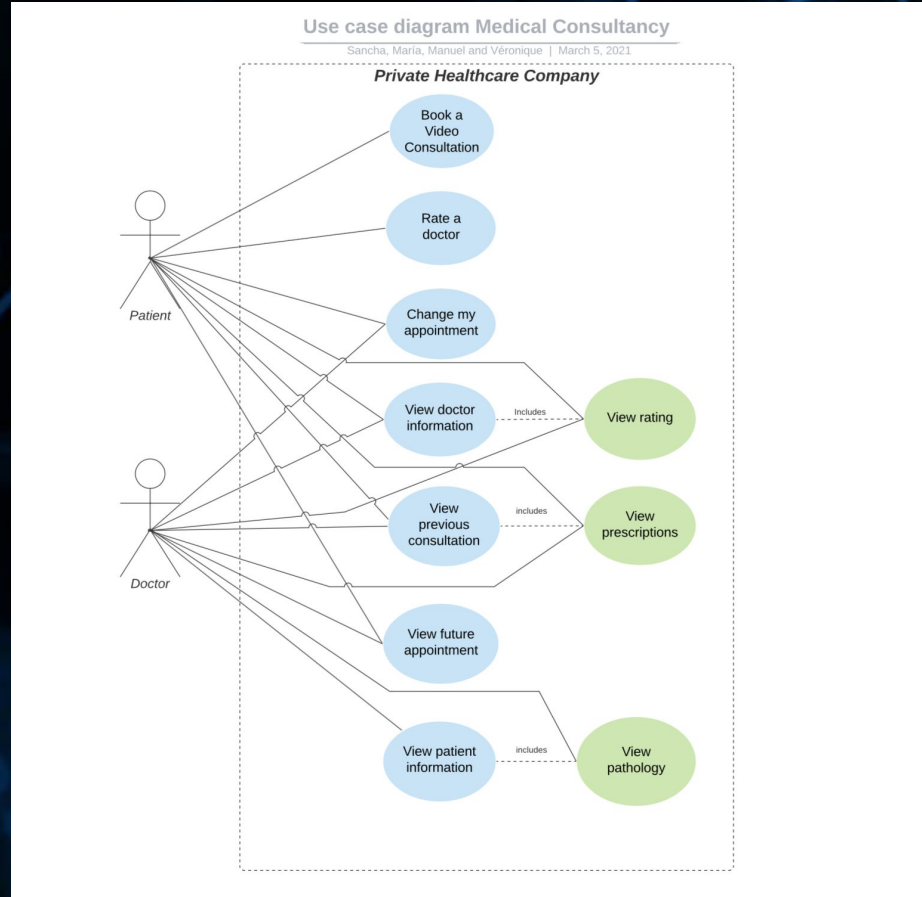
## PRIVATE INSURANCE COMPANY WITH ADDITIONAL ONLINE SERVICE

## AVERAGE PRIVATE INSURANCE COMPANY

VS



# Which tools does MedConline provide?






# Captivating the project's needs:

## The ER Diagram

How can we visualize the logical structure of our service?

How can we analyze the data requirements to produce a well-designed database?

Our entities: 

1. Patient
2. Pathology
3. Video-consultation
4. Prescription
5. Doctor
6. Rating

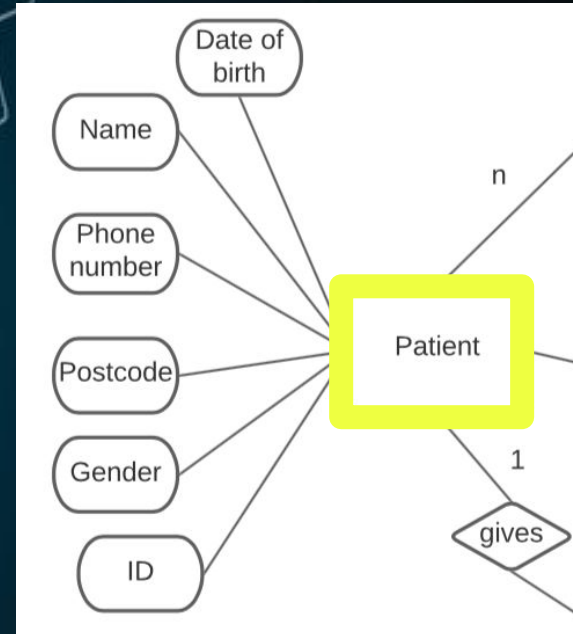
Our relationships: 

- |             |                     |
|-------------|---------------------|
| 1. Suffers  | <b>Many-to-Many</b> |
| 2. Books    | <b>One-to-Many</b>  |
| 3. Provides | <b>One-to-Many</b>  |
| 4. Attends  | <b>One-to-Many</b>  |
| 5. Receives | <b>One-to-Many</b>  |
| 6. Gives    | <b>One-to-Many</b>  |

# 1. Patient

## Attributes:

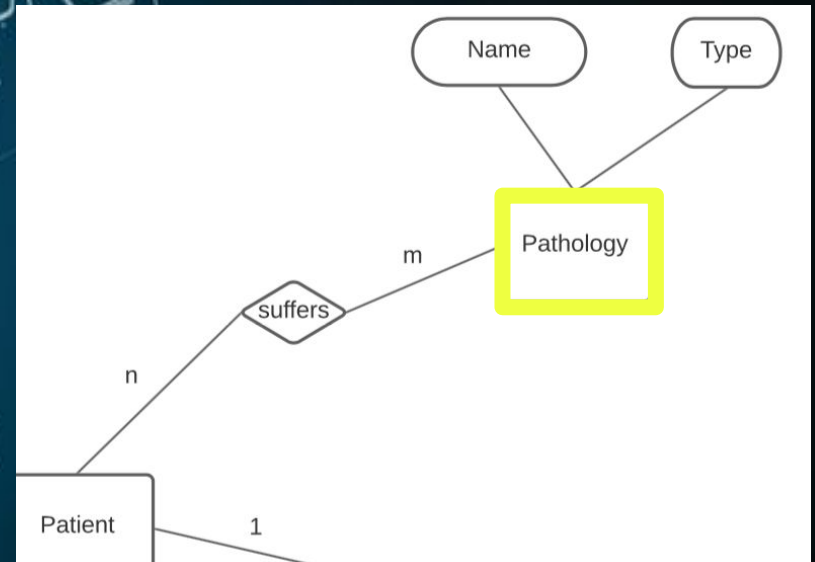
1. Name
2. Date of Birth
3. Phone number
4. Postcode
5. Gender
6. ID



## 2. Pathology

### Attributes:

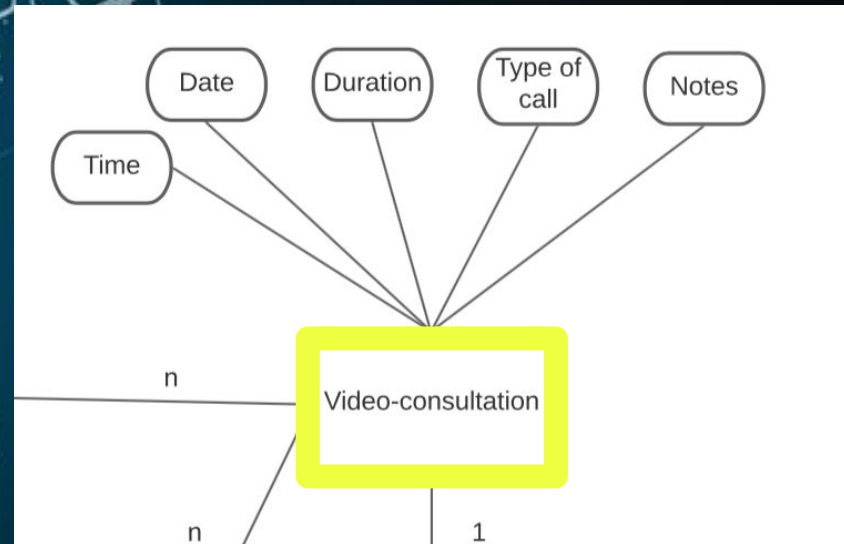
1. Name
2. Type
  - a. Dermatopathology
  - b. Neuropathology
  - c. Pulmonary pathology
  - d. Renal pathology
  - e. Surgical pathology, etc



### 3. Video-consultation

#### Attributes:

1. Date
2. Time
3. Duration
4. Type of call
5. Notes





### 3. Video-consultation: Type of call

#### ➤ Type of call:

- Medical Emergencies

- Medical doubts

- Medication

- Treatments

- Review of results

- Specialists:

- General medicine
- Dermatology
- Endocrinology
- Gynecology, etc.

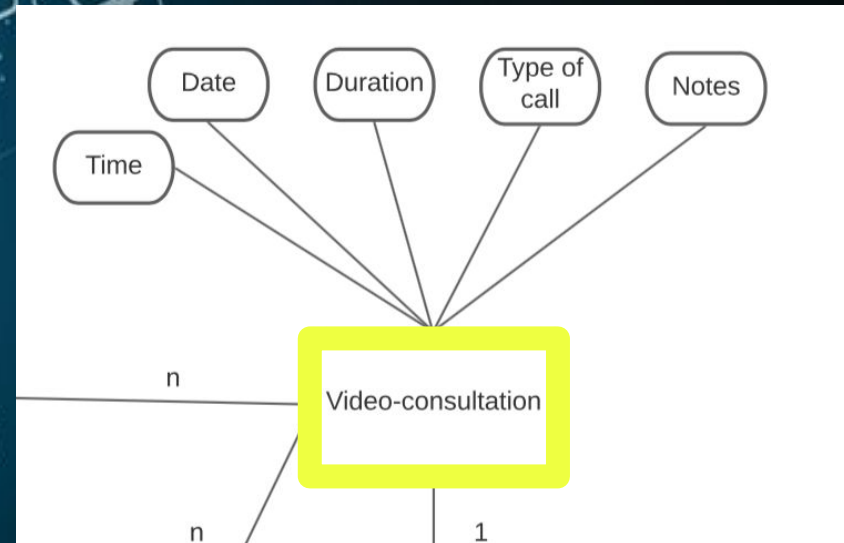
- Health programs:

- Nutrition Program
- Psychology Program
- Personal Trainer Program
- Maternal and Child Program
- Healthy Child Program
- Pilates Program
- Smoking Cessation Program

### 3. Video-consultation






#### Attributes:

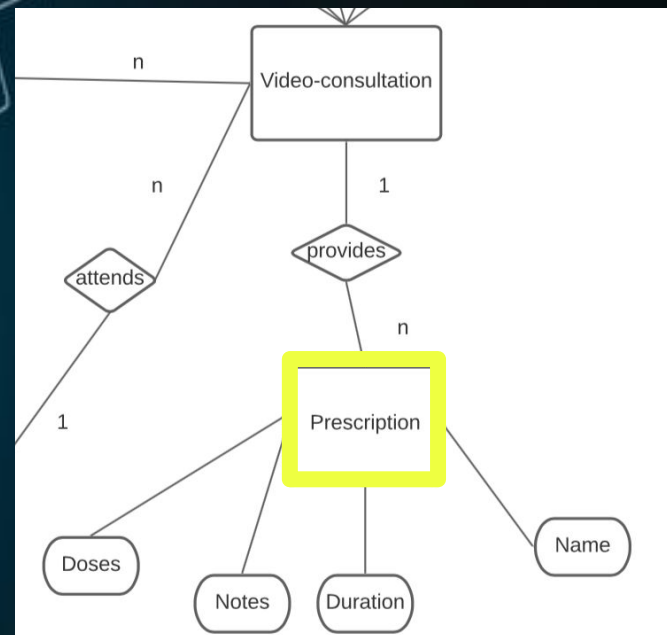
1. Date
2. Time
3. Duration
4. Type of call
5. Notes



## Attributes:

1. Name
2. Doses
3. Duration
4. Notes

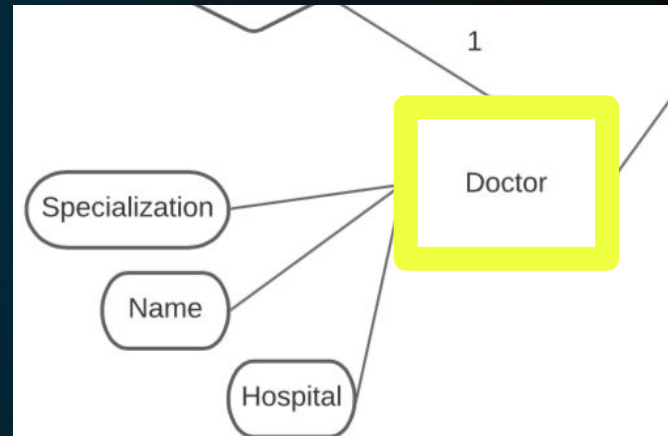
 <p><b>MEDLIFE CLINIC</b></p>	<p><b>Doctor details</b> </p> <p>Dr. Ashwini Krishna MEED Reg. No. 44875, Siddavaram Hyderabad, 500</p>
<p><b>Patient details</b> </p> <p>Shruti Raj 25, Penada</p>	<p><b>Date</b> </p> <p>11-06-2019</p>
<p><i>R<sub>2</sub></i></p> <p> T. Tabana 4mg 1-0-0 x 1 month  T. Escapin 4mg 1-0-0 x 1 month  T. Pan-D 5mg 1-0-0 x 1 month  T. Once 2mg 1-0-0 1 month</p> <p><i>S</i></p> <p><i>[Signature]</i></p> <p><b>Doctor's signature</b> </p>	



## 5. Doctor

### Attributes:

1. Name
2. Specialization
3. Hospital








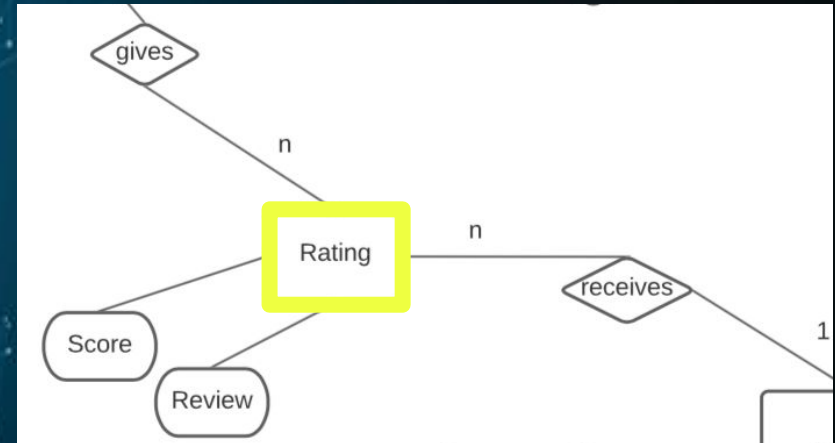
## 6. Rating

### Attributes:

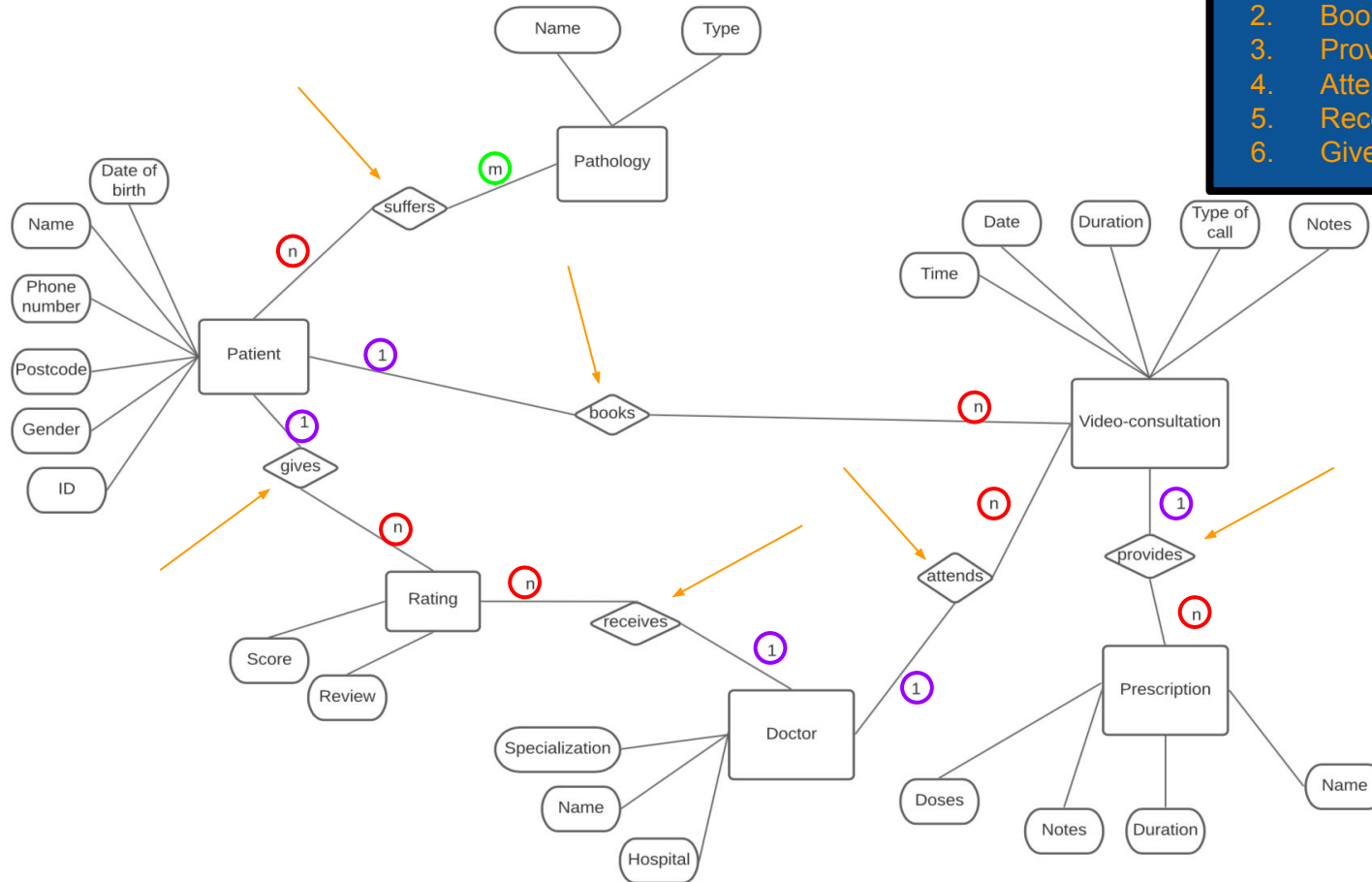
1. Score (1-5)
2. Review

#### Top Rated Doctors

Family Doctor / G.P.	Family Doctor / G.P.	<a href="#">View All</a>
Gynecologist (OBGYN)		<b>Dr. Mitch Freeman</b> ★★★★★ 253 reviews "Why is Dr Freeman still going on writing about ..."
Dentist		<b>Dr. William H. Romero</b> ★★★★★ 181 reviews "Love this doc! Love this doc! Love this doc! Love ..."
Orthopedic Surgeon		<b>Dr. Leo Lasalle</b> ★★★★★ 88 reviews "Doc Lasalle a pu me recevoir d'urgence à ..."
Internist / Geriatrician		<b>Dr. Graham Lohln</b> ★★★★★ 169 reviews "Why would a doctor need to write about ..."
Cosmetic Surgeon / Plastic S...		
Dermatologist		
Psychologist		
Psychiatrist		
Chiropractor		
Surgeon (general)		



# → Relationships



1. Suffers **Many-to-Many**
2. Books **One-to-Many**
3. Provides **One-to-Many**
4. Attends **One-to-Many**
5. Receives **One-to-Many**
6. Gives **One-to-Many**

# Normalizing our database:

## Relational tables

### 1. Patient

Patient						
ID_Patient	Name	Gender	Date of birth	ID	Phone number	Postcode
1	Alfredo Ortega	Male	14/07/2000	81821390A	683838316	29640
2	Juan Martinez	Male	12/05/1970	46578810Z	876969695	23810
3	Daniela Perez	Female	10/09/1993	18328378Y	691029315	17389
4	Maria Fernandez	Female	15/07/1989	15447823B	781928390	28044
5	Isabel Lopez	Female	30/01/1976	97854135K	653462100	28048
6	Silvia Rodriguez	Female	03/05/1965	34110287L	629053400	28055
7	Jorge Garcia	Male	02/12/1988	70063217F	647799432	48007

Primary Key:  
ID\_patient

Property

## 2. Doctor

Doctor			
ID_Doctor	Specialization	Name	Hospital
1	Cardiology	Lara Sanchez	Hospital Universitario La Paz
2	Family medicine	Lucia Fernandez	HM Montepincipe
3	Neurology	Pedro Hoyos	Quironsalud Ruber
4	Urology	Javier Alonso	Hospital Universitario 12 Octubre
5	Nutritionist	Luis Hernandez	Hospital San Rafael
6	Pediatrics	Clara Puig	Hospital Infantil Universitario Niño Jesus
7	Gynecology	Alfonso Garcia	Hospital Ramon y Cajal





### 3. Video-consultation

Video-consultation							
ID_Video	Date	Time	Duration	Type of call	Notes	ID_Doctor	ID_Patient
1	23/02/2021	5:45:00 PM	1:21:56	Nutrition Programme	Diet has been set based on previous blood tests.	5	1
2	24/02/2021	8:17:00 AM	2:38:10	Emergency	Periodic chest pains. Heart rate and blood pressure must be checked through electrocardiogram and echocardiogram examinations required for further analysis.	6	5
3	21/02/2021	12:15:00 PM	0:15:00	Medical doubts	The patient had doubts over progressive headaches during the day. Migrane prescription pill set.	3	6
4	23/02/2020	1:20:00 PM	0:05:34	Cardiology	The patient required the dosage for heart palpitation medication.	1	7
5	10/01/2019	6:30:00 PM	0:30:45	Gynecology	Review of birth control medication. It has been decided to continue with the same method.	7	3

Foreign keys:

- ID\_patient
- ID\_Doctor



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## 4. Prescription

Prescription					
ID_Prescription	Doses	Notes	Duration	Name	ID_Video
1	2	Take 400mg every six hours. Should not be used for more than seven days at a time.	One week since prescription is set.	Tylenol coated tablets	3
2	2	100mg daily in two doses. Should be taken with or immediately following meals.	The dosage may be gradually increased at weekly intervals until optimum clinical response has been obtained or there is pronounced slowing of heart rate.	Metaprolol	4
3	1	Take one 500mg oral contraceptive every morning.	Until patient decides to halt.	Reclipsen	5



## 5. Pathology

Pathology		
ID_Pathology	Name	Type
1	Migraine	Neuropathology
2	Tachycardia	Cardiopathology
3	Diabetes type II	Obesity

Patient & Pathology	
ID_patient	ID_Pathology
6	1
7	2
2	3

Foreign keys:  
-ID\_patient  
-ID\_Pathology

Many-to-one

## Many-to-Many relationship: Patient&&Pathology table

Foreign keys:  
-ID\_patient  
-ID\_Pathology

## 6. Rating

Rating			
Score	Review	ID_patient	ID_Doctor
4	Dr Hoyos was a great doctor! He was very understanding and he listened to all my concerns.	6	3
2	I was very disappointed with the doctor assigned. I had a terrible experience, he was very rude and he didn't bother to explain me the issue!!	7	1
5	I was very impressed and pleased. I felt very comfortable during the consultation and I highly recommend him to anyone looking for a specialist.	3	7
3	Dr Hernandez is terrific. Knowledgeable, sensitive, informative... I immediately felt at ease – he combines expertise and a willingness to listen and discuss. However, he is always very late!	1	5



# SQL: Table creations

```
1 CREATE TABLE patient(  
2 id_patient INTEGER PRIMARY KEY AUTOINCREMENT,  
3 name TEXT NOT NULL,  
4 gender TEXT,  
5 date_of_birth DATE NOT NULL,  
6 id TEXT NOT NULL UNIQUE,  
7 phone_number TEXT UNIQUE,  
8 postcode TEXT  
9 );
```

```
11 CREATE TABLE doctor(  
12 id_doctor INTEGER PRIMARY KEY AUTOINCREMENT,  
13 specialization TEXT NOT NULL,  
14 name TEXT NOT NULL,  
15 hospital TEXT  
16 );
```

```
38 CREATE TABLE pathology(  
39 id_pathology INTEGER PRIMARY KEY AUTOINCREMENT,  
40 name TEXT NOT NULL,  
41 type TEXT  
42 );
```

```
44 CREATE TABLE patient_pathology(  
45 id_patient INTEGER REFERENCES patient(id_patient) ON DELETE SET NULL,  
46 id_pathology INTEGER REFERENCES pathology(id_pathology) ON DELETE SET NULL,  
47 PRIMARY KEY(id_patient,id_pathology)  
48 );
```



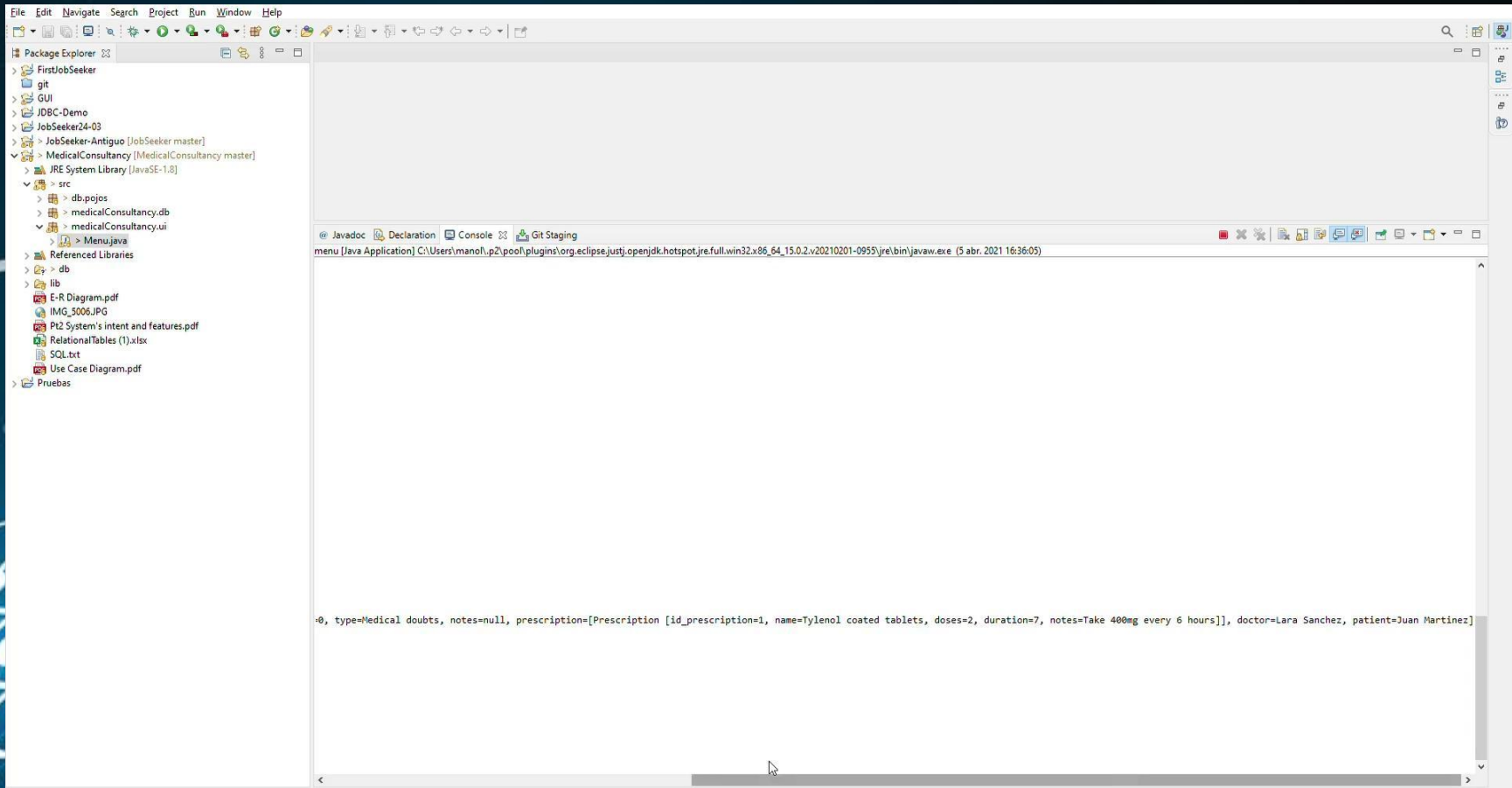
# SQL: Table creations

```
18 CREATE TABLE videoconsultation(  
19   id_video INTEGER PRIMARY KEY AUTOINCREMENT,  
20   consultation_date DATE NOT NULL,  
21   consultation_time TIME NOT NULL,  
22   duration INTEGER,  
23   type_of_call TEXT,  
24   notes TEXT,  
25   id_doctor INTEGER REFERENCES doctor(id_doctor) ON DELETE SET NULL,  
26   id_patient INTEGER REFERENCES patient(id_patient) ON DELETE SET NULL  
27 );  
--
```

```
29 CREATE TABLE prescription(  
30   id_prescription INTEGER PRIMARY KEY AUTOINCREMENT,  
31   doses INTEGER NOT NULL,  
32   notes TEXT,  
33   duration INTEGER NOT NULL,  
34   name TEXT NOT NULL,  
35   id_video INTEGER REFERENCES videoconsultation(id_video) ON DELETE SET NULL  
36 );
```

```
50 CREATE TABLE rating(  
51   id_patient INTEGER REFERENCES patient(id_patient) ON DELETE SET NULL,  
52   id_doctor INTEGER REFERENCES doctor(id_doctor) ON DELETE SET NULL,  
53   score INTEGER,  
54   review TEXT,  
55   PRIMARY KEY(id_patient,id_doctor)  
56 );
```







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