

**PROJECT REPORT**  
DATABASE MANAGEMENT SYSTEM



**ONLINE MEDICAL-PRESCRIPTION SYSTEM**  
(Website - “Doctor on Call” Using MY SQL at backend)



(DEPARTMENT OF COMPUTER SCIENCE AND ENGG)  
(DELHI TECHNOLOGICAL UNIVERSITY )

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# **ACKNOWLEDGMENT**

We would like to express our special thanks to our teacher, Prof. Manoj Sethi sir , who gave us the golden opportunity to do this wonderful project on the topic “**ONLINE MEDICAL-PRESCRIPTION SYSTEM**”, which also helped us in knowing about so many new things.

# **CERTIFICATE**

This is to certify that, Udaykumar Khemewar (2K19/CO/417) And Tanishq Kinra - (2K19/CO/405) of Batch A6 , have done their project on **ONLINE MEDICAL-PRESCRIPTION SYSTEM**

Under supervision and guidance of Prof. Manoj Sethi sir, teacher of “Database Management System” during academic year 2020-2021.

## DATABASE MANAGEMENT SYSTEM

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## **INTRODUCTION**

The pandemic has imposed many restrictions and limitations on every individual. It has affected every business, and one of the most adversely affected is the pharmaceutical industry, where the non-covid patients aren't able to meet doctors. Our project aims to provide a solution to the aforementioned problem and provide a means for those with some health issues and require a prescription on daily purpose. There would be a face-to-face webcam meeting of doctor with patient at the time provided by doctor. This meeting would be secured with a meeting code so any unknown person cannot enter unnecessarily. We will be storing records of the patient in MYSQL data base for future reference.

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## **DESCRIPTION**

India's growing population of young and old living in nuclear units who lack the support systems they were used to. To each his/her own is the motto of the 21st century and while these nuclear, independent units look more functional, even desirable, no one has considered the momentary breakdown of the unit when one or all members fall sick. E-pharmacies are a boon to such busy, independent units, bringing medicines to your doorsteps at your time of need. Even when it is still a nascent industry, the government has laid down some conditions for e-pharmacies that they have to fulfil before delivering medicines to the customer.

There are several critiques to E-Consultation, the prime concern being that remote diagnosis of a patient maybe be erroneous and harm the patient. However, even the Government of India has started seeing the potential in E-consultation and is striving to promote digital healthcare.

Here are some benefits of e-consultation.

## 1. No Geographical Barriers

The biggest advantage of medical e-consultation is the removal of any geographical barrier between the patient and the doctor. A patient can consult any doctor that he/she wishes to even if he/she is from another city, country or even continent. An e-consultation is also very convenient for anyone who keeps traveling due to work and requires periodic medical attention.

## 2. Timely Treatment:

No one likes to wait for their turn at the doctor's chamber. In medical e-consultation, the patient gets to choose the time at which the consultation will take place, and accordingly receives medical guidance at the designated hour in the comfort of his/her own home.

## 3. A Reassuring Second Opinion:

Even after a fruitful and satisfactory visit to the doctor, it is wise to get a second opinion just to be on the safer end of the spectrum. An online consultation session is not to replace your primary care physician but to supplement the course of treatment prescribed by the

## 4. A Cost-efficient Provision:

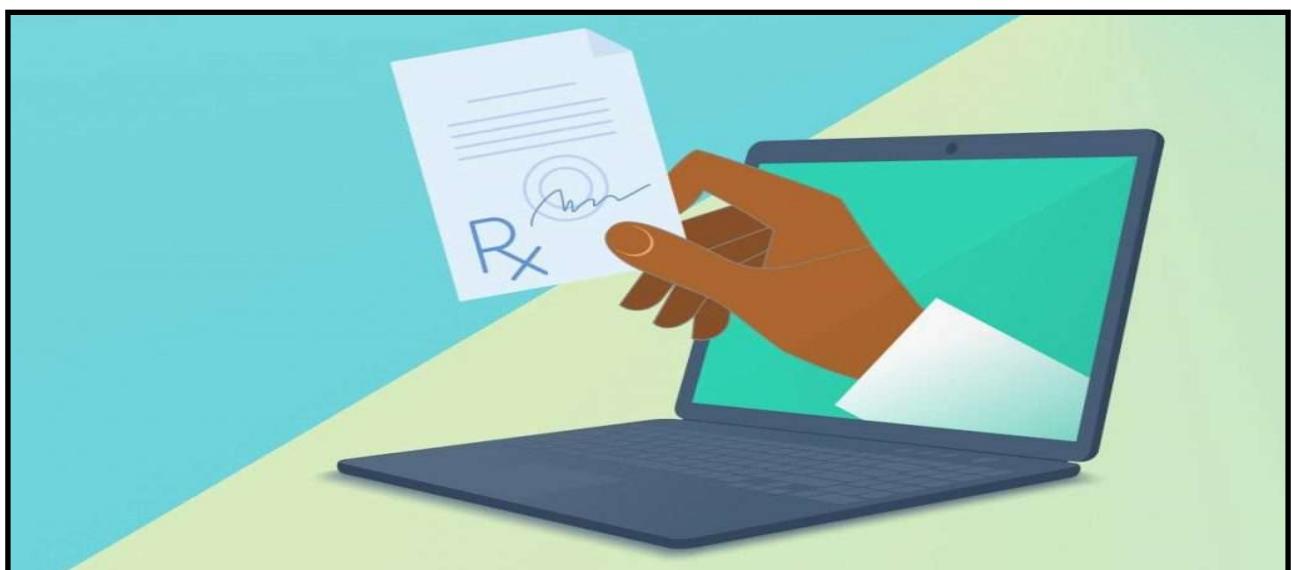
For people who do not have access to health insurance, a visit to the doctor can be much more expensive than a paid e-consultation session. So, a remote consultation session is a relatively inexpensive and viable option for people who avoid visiting the doctor due to the high costs involved. You can also get rid of the transportation cost that a visit to the doctor may entail.

## 5. High Comfort Level:

In the end of it all, convenience counts. The e-consultation service is available 24x7. So, you can schedule a consultation at any time of the day without having to interrupt your hectic schedule. You can see a doctor any time on any day from your home, your office or any place you prefer. The convenience, that a familiar setting brings, also makes it easier for the patient to open-up to the doctor.

## 6. Increased Self-sufficiency and Improved Self-diagnoses:

Online medical consultations increase awareness among patients regarding symptoms and potential causes. Because a doctor is not present physically, the patient must assist the doctor in every possible way by palpating a distended lymph node or an inflamed tissue on the body. This makes you well-equipped to take stock of any health issue to ask for assistance.



## **WORKING**

Our programs is accessible to admin and user those are registered in DocOnCall.

It works in the following steps:-

- 1.Users have to create an account in our website. This data will be stores in our database. For this we have used MYSQL to store data like user name , password and other credentials like age , sex, blood group etc.
- 2.After creating an account user can login to our website using the credential stored in the database management system. In case the user forgets his/her password he/she is required to enter their email id and again verify themselves and verify themselves via the verification code. It may be noted here that if a user has already logged in through a particular browser and he/she hasn't logged out in the last session then they are not required to fill their login details the next time they use the platform.
- 3.Users will then have to select the department and respective doctor available for their appointment.
- 4.Once the department and doctor is selected user can set an appointment anytime anywhere where ever internet connectivity is available.

## DATABASE MANAGEMENT SYSTEM

5.After setting an appointment user will be provided with a meeting-link and this link will be used to enter the video room with the doctor.After getting a meet link , user has authenticate himself with the code provided through the email. Meeting duration may vary for commercial purposes .

6. Depending on his/her understanding of the patient's symptoms, the doctor may then either prescribe medicines  
(Note: it would be an oral cum written prescription, and later on this prescription will be stored in our database for future references. )

## **ENTITY RELATIONSHIP DIAGRAM**

An Entity Relationship (ER) Diagram is a type of flowchart that illustrates how “entities” such as people, objects or concepts relate to each other within a system.

ER Diagrams are most often used to design or debug relational databases in the fields of software engineering, business information systems, education and research. Also known as ERDs or ER Models, they use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships and their attributes. They mirror grammatical structure, with entities as nouns and relationships as verbs.

In our project we have broadly five entities with several relationships.

Doctor(strong entity), Patient(strong entity),Vaccination/medication( weak entity depends on doctor), Admin(Strong entity),Family (weak entity).

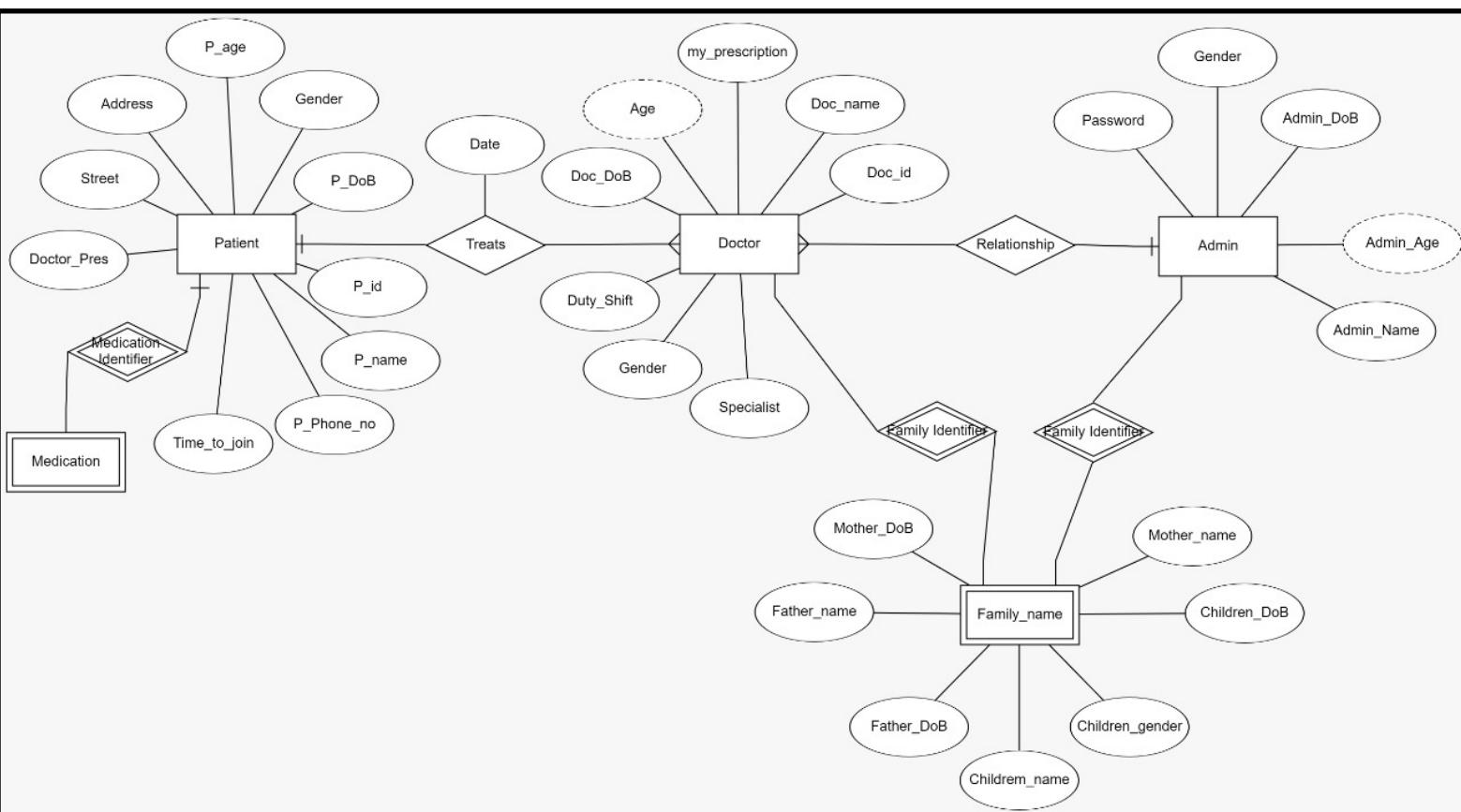
Relations:- We have two relations

i)Treats:- It shows relation between doctor and patient which is being treated and it is many to many relationship.

ii) Setting shifts:-It shows relation of admin with doctor.admin is responsible for setting shifts and it is many to one relationship.

# DATABASE MANAGEMENT SYSTEM

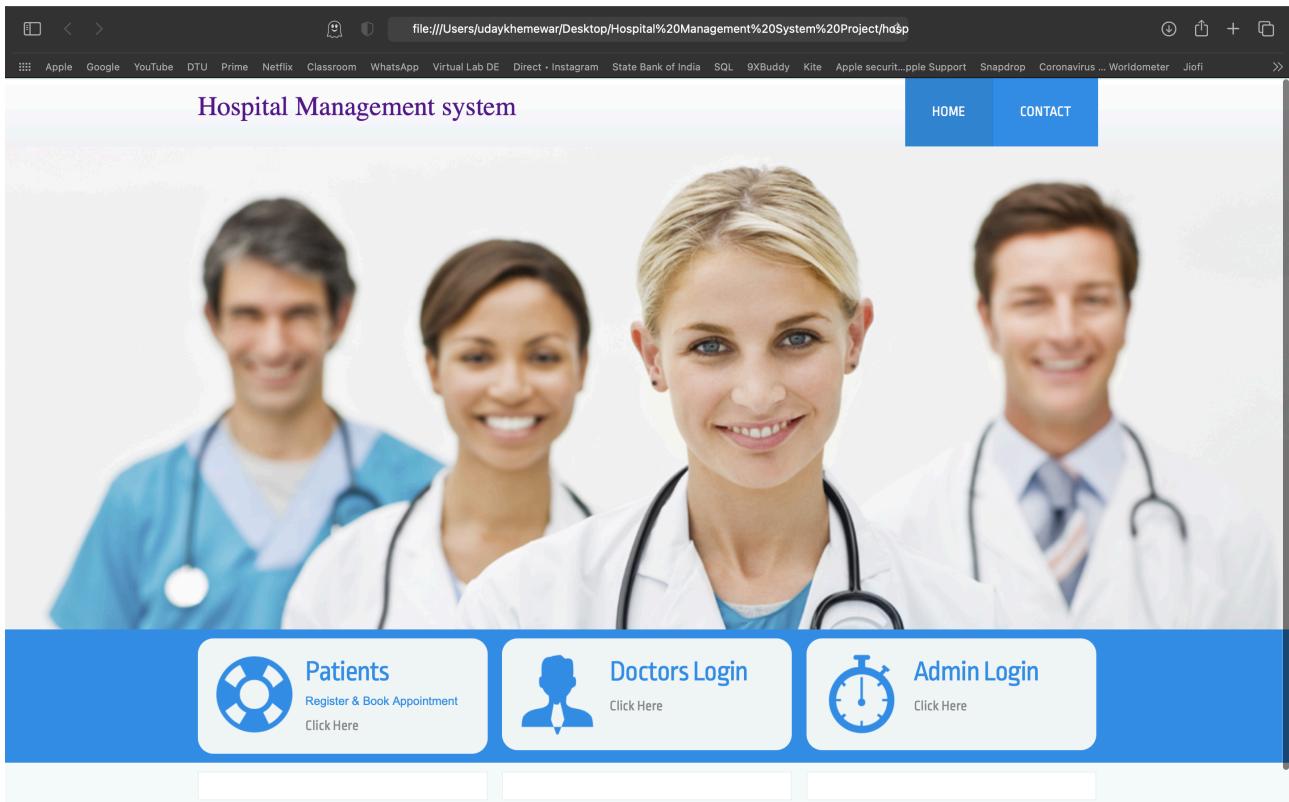
## ER diagram for online medical prescription



## **WORK DONE UPTO 1ST REVIEW**

- The front end part of the website is almost done except few designs have to be added in order to make it more attractive and user friendly.
- 
- We have used MySql as database to store user's details and the user is required to verify himself/herself when they sign up for the first time.
- 
- This verification is done via sending a random verification code to the entered email.
- 
- The home page (or landing page) of the website is 50% developed. It has a short description , the platform introduction and a navigation bar.

## SCREENSHOT OF OUR WORK DURING 1ST REVIEW



### Make an Appointment

First Name

Last Name

Email Id

Mobile No

-- Sex --

appointment date

---

## **WORK DONE AFTER 2ND REVIEW**

- As we have started doing work on the back-end. Now the options provided by us are responsive on any action and we have been provided them functionalities using backend.
- As we are storing the data (only basic details) of patients in database using “MySQL”.
- Now Patients and doctors are able to Login with their credentials and the patience can use appointment function.
- We have fully completed the frontend part and 70 % of the backend part.

## DATABASE MANAGEMENT SYSTEM

# SCREENSHOT OF OUR WORK DURING 2ND REVIEW



## DOC Online Hospital

HOME ABOUT US SERVICE DOCTORS CONTACT US



We are Online Hospital and medical center

Say Hello to your Doctor!  
24/7 Online Consultation.  
Anytime and Anywhere.

We Have Medicare Plan Options for You!

This Website aims to provide a online medical treatment via call or video conference and provide a mean for those with some health issues and require a prescription on

A screenshot of the 'Hospital Management System' (HMS) application. The interface is divided into sections: a left sidebar with 'MAIN NAVIGATION' containing links like Dashboard, Doctors, Users, Patients, Appointment History, Contact Queries, Doctor Session Logs, User Session Logs, Reports, and Patient Search; a top header with the system name and an 'Admin' user icon; and a central 'ADMIN | DASHBOARD' area. This dashboard features five cards: 'Manage Users' (Total Users: 8), 'Manage Doctors' (Total Doctors: 12), 'Appointments' (Total Appointments: 4), 'Manage Patients' (Total Patients: 6), and 'New Queries' (Total New Queries: 1). At the bottom, there is a footer note: '© 2021 HMS. All rights reserved'.

## **FUNCTIONS FOR EASY USE OF WEBSITE**

- We have provided the option to reset the password if patient forgets, by just filling few basic details.
- Link for communication with doctors will not be provided on E-mail. The link will be available in patients login page for patient convenient.
- Only few details of patient are storing in database using “Mysql” , We are working on it to store all the details of patient.
- For more interactive session webcam portion will also be added. As of now, It requires domain server to use the video conference options and the video plugins are developed.
- We will also try to link it with national digital health mission.

# DATABASE MANAGEMENT SYSTEM

**HMS**

- MAIN NAVIGATION
- [Dashboard](#)
- [Doctors](#)
- [Users](#)
- [Patients](#)
- [Appointment History](#)
- [Consultant Queries](#)
- [Doctor Session Logs](#)
- [User Session Logs](#)
- [Reports](#)
- [Patient Search](#)

Hospital Management System Admin

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Doctor Specialization

Doctor Specialization

Manage Doctor Specialization				
#	Specialization	Creation Date	Updation Date	Action
1.	Gynecologist/Obstetrician	2016-12-28 12:07:25	0000-00-00 00:00:00	
2.	General Physician	2016-12-28 12:08:12	0000-00-00 00:00:00	
3.	Dermatologist	2016-12-28 12:08:48	0000-00-00 00:00:00	
4.	Homeopath	2016-12-28 12:09:26	0000-00-00 00:00:00	
5.	Ayurveda	2016-12-28 12:09:51	0000-00-00 00:00:00	
6.	Dentist	2016-12-28 12:10:08	0000-00-00 00:00:00	
7.	Ear-Nose-Throat (Ent) Specialist	2016-12-28 12:11:18	0000-00-00 00:00:00	
8.	Demo test	2016-12-28 13:07:39	0000-00-00 00:00:00	
9.	Bones Specialist demo	2017-01-07 13:37:53	0000-00-00 00:00:00	
10.	Test	2019-06-23 23:21:06	2019-06-23 23:25:06	
11.	Dermatologist	2019-11-11 00:06:36	2019-11-11 00:06:50	

**HMS**

- MAIN NAVIGATION
- [Dashboard](#)
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- [User Session Logs](#)
- [Reports](#)
- [Patient Search](#)

Hospital Management System Admin

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PATIENTS | APPOINTMENT HISTORY

Patients / Appointment History

#	Doctor Name	Patient Name	Specialization	Consultancy Fee	Appointment Date / Time	Appointment Creation Date	Current Status	Action
1.	abc	Test user	Demo test	600	2019-06-29 / 9:15 AM	2019-06-24 00:01:28	Cancel by Doctor	Canceled
2.	Sanjeev	Amit kumar	Ayurveda	8050	2019-11-08 / 1:00 PM	2019-11-05 15:58:54	Active	No Action yet
3.	Anuj kumar	Uday	Dermatologist	500	2019-11-30 / 5:30 PM	2019-11-11 00:11:34	Cancel by Doctor	Canceled
4.	Sarita Pandey	Uday Khemewar	Homeopath	600	2021-04-29 / 1:15 AM	2021-04-22 01:13:59	Cancel by Patient	Canceled

# DATABASE MANAGEMENT SYSTEM

HMS

MAIN NAVIGATION

- Dashboard
- Doctors
- Users
- Patients
- Appointment History
- Conatctus Queries
- Doctor Session Logs
- User Session Logs
- Reports
- Patient Search

ADMIN | MANAGE USERS

Manage Users

#	Full Name	Address	City	Gender	Email	Creation Date	Updation Date	Action
1.	tanishq	delhi	fbd	male	tanishq@gmail.com	2016-12-30 11:04:39	2021-04-22 01:42:04	
2.	Sarita pandey	New Delhi India	Delhi	female	test@gmail.com	2016-12-30 11:04:39	0000-00-00 00:00:00	
3.	Amit	New Delhi	New delhi	male	amit@gmail.com	2017-01-07 12:06:53	0000-00-00 00:00:00	
4.	Rahul Singh	New Delhi	New delhi	male	rahul@gmail.com	2017-01-07 13:11:14	0000-00-00 00:00:00	
5.	Amit kumar	New Delhi India	Delhi	male	amit12@gmail.com	2017-01-07 13:30:26	0000-00-00 00:00:00	
6.	Test user	New Delhi	Delhi	male	tetuser@gmail.com	2019-06-23 23:54:53	2019-06-24 00:06:09	
7.	Uday	Delhi	ND	Male	uday@gmail.com	2016-12-30 11:04:39	2021-04-22 01:39:53	
8.	Uday Khemewar	Nagpur	Nagp	male	udaykhemewar@gmail.com	2021-04-22 01:12:02	2021-04-22 01:34:14	



## DOCTOR TABLE

```

mysql> select * from user;
ERROR 1146 (42S02): Table 'hms.user' doesn't exist
mysql> select * from users;
+----+-----+-----+-----+-----+-----+-----+-----+
| id | fullName | address | city | gender | email | password | regDate | updationDate |
+----+-----+-----+-----+-----+-----+-----+-----+
| 1 | tanishq | delhi | fbd | male | tanishq@gmail.com | tanishq123 | 2016-12-30 11:04:39 | 2021-04-22 01:42:04 |
| 2 | Sarita pandey | New Delhi India | Delhi | female | test@gmail.com | f925916e2754e5e03f75dd58a5733251 | 2016-12-30 11:04:39 | 0000-00-00 00:00:00 |
| 3 | Amit | New Delhi | New delhi | male | amit@gmail.com | f925916e2754e5e03f75dd58a5733251 | 2017-01-07 12:06:53 | 0000-00-00 00:00:00 |
| 4 | Rahul Singh | New Delhi | New delhi | male | rahul@gmail.com | f925916e2754e5e03f75dd58a5733251 | 2017-01-07 13:11:14 | 0000-00-00 00:00:00 |
| 5 | Amit kumar | New Delhi India | Delhi | male | amit12@gmail.com | f925916e2754e5e03f75dd58a5733251 | 2017-01-07 13:30:26 | 0000-00-00 00:00:00 |
| 6 | Test user | New Delhi | Delhi | male | tetuser@gmail.com | f925916e2754e5e03f75dd58a5733251 | 2019-06-23 23:54:53 | 2019-06-24 00:06:09 |
| 7 | Uday | Delhi | ND | Male | uday@gmail.com | b0931392878fe70bf92e4f699dcf9213 | 2016-12-30 11:04:39 | 2021-04-22 01:39:53 |
| 8 | Uday Khemewar | Nagpur | Nagp | male | udaykhemewar@gmail.com | b0931392878fe70bf92e4f699dcf9213 | 2021-04-22 01:12:02 | 2021-04-22 01:34:14 |
+----+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)

mysql> 

```

## ADMIN TABLE

```

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

[mysql]> use hms;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
[mysql]> select * from admin;
+----+-----+-----+
| id | username | password | updationDate |
+----+-----+-----+
| 1 | admin | Test@12345 | 28-12-2016 11:42:05 AM |
+----+-----+-----+
1 row in set (0.00 sec)

```

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## **CONLCUSION**

In this project, we will learn web development skills which includes :

Making a server, making web pages, fetching details of a user from a third party website, hosting the website, maintaining database, using proper queries to access correct data from the database, prevent storing redundant data in the database, proper encryption and authentication of user data , prevent invalid access of data, maintenance of software, removal of bugs through proper and thorough testing, deploying the website and collect user feedback, work on new features depending on the user response, roll out new versions of the website with time with more enhanced features and user experience, proper and timely response of user complaint.

## **REFERENCES**

- [1] Punam Kumari and Rainu Nandal, “A Research Paper On Website Development Optimization Using Xampp/PHP”, Volume 8, No. 5, May-June 2017 Tech Research Scholar, MDU, Rohtak, Haryana 2 Asst. Prof, M.Tech, MDU, Rohtak, Haryana, India
- [2] Syed Asif Hassan and Tabrej Khan, “A proposed prototype of e-pharmacy web application for the consumers of saudi arabia”, Volume 8, No. 9, November-December 2017
- [3] Nicole Paolini Albanese and Michael J. Rouse, “Scope of Contemporary Pharmacy Practice: Roles, Responsibilities, and Functions of Pharmacists and Pharmacy Technicians”, Approved for distribution by CCP Board of Directors on February 25, 2009

## **Tools used and other links-**

1. SQL Implementation Tool: MY SQL Server
  2. Tool for ER-Diagram : <https://drawio-app.com/tutorials>
  3. <https://www.octalsoftware.com/blog/e-prescription-software-mobile-app-development-cost-features>
  4. Fundamental of database system by Navathe
  5. Database Management system by Henry Korth and Abraham & Sudarshan
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