Mini Project

Title: **Covid Management System**

Problem Statement:

The project focuses on handling a user and an admin, with the scope of bed booking/handling, and vaccine booking/handling.

A user is identified by user id(pk), username and password.

User has functionality of either booking a vaccine or a bed. A user can book more than one vaccine slot/beds.

A vaccine has attributes of slot date, type and slot time.

These vaccines are available at vaccine centres which have their centre id(pk), address, pincode, type, cname and d_count(dose count).

The user wanting to book a bed gets registered as patient, identified by patient id(pk), fname, lname, phone, ssn, dob(age as derived) and gender.

Patient gets admitted in hospital having, reg_no(pk), pincode, phone_no, hname, email, address and count of available beds. A hospital has many patients.

A hospital has many beds which are identified by type, bed_no, status and user.

An admin having a password can login to the respective hospital/vaccine centre and can update status of beds and vaccine count respectively.

A hospital has more than one people having admin authorities and same for vaccine centre.

Group Members:

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Front End Design:

Reg_no	Name	Pincode	Available Beds
9	P. D. Hinduja National Hospital	400016	10
10	My Aarogya Medical Center	400016	10
18	SL Raheja Hospital	400016	4

Enter Pincode 400016

Search

O2   2

Continue

Dashboard   Logout

Patient Details   Logout

First Name: Temp

Last Name: pass

DOB: 2022-01-29   Confirm

Gender: Male

Aadhar no.   123456789123

Phone   1234567890

Message

Bed 502 booked successfully! Contact: 24443893 for more details...

OK

Dashboard

Admin Login

Select: ● Hospital   ○ Vaccine Centre

Reg.no/CentreID:

Password:

Enter

Back

Event handling code:

(Entering patient details):
private void Confrim_BedActionPerformed(java.awt.event.ActionEvent evt) {

```
    if(ssn.getText().length() != 12){
        JOptionPane.showMessageDialog(null, "Aadhar card number should be of
length 12!");
    } //Check for validation of aadhar card number
    else if(phone.getText().length() != 10){
        JOptionPane.showMessageDialog(null, "Phone number should be of 10
digits!");
    } //Check for validation of phone number
    else{
    Connection con = CovidManagement.connecter();
    String sql = "update beds set user=?, status='NA' where status='A' and reg_no=?
and type=? and bed_no=?;";
    PreparedStatement ps = null;
  try{
    ps = con.prepareStatement(sql);
    ps.setString(1, usn);
    ps.setString(2, reg);
    ps.setString(3, type);
    ps.setString(4, bed);
    ps.executeUpdate();
  }catch(SQLException e){JOptionPane.showMessageDialog(null, e);}
  try{
    sql = "insert into patient(lname, fname, dob, gender, ssn, user_name, phone)
values(?,?,?,?,?,?,?)";
    ps = con.prepareStatement(sql);
    ps.setString(1, lname.getText());
    ps.setString(2, fname1.getText());
    ps.setString(3, dob.getText());
    ps.setString(4, gender.getText());
    ps.setString(5, ssn.getText());
    ps.setString(6, usn);
    ps.setString(7, phone.getText());
    if(ps.execute()){
        JOptionPane.showMessageDialog(null, "Error occurred!");
    }
    else{
```

```java
        int i = 0;
        String[] arr = new String[2];
        sql = "SELECT * FROM hp_phone WHERE reg_no=?";
            ps = con.prepareStatement(sql);
            ps.setString(1, reg);
            ResultSet rs = ps.executeQuery();
            while(rs.next()){
                arr[i++] = String.valueOf(rs.getString("phone_no"));
            }
         if(i==1)
        JOptionPane.showMessageDialog(null, "Bed "+bed+" booked successfully!
Contact: "+arr[--i]+" for more details...");
 else{
            JOptionPane.showMessageDialog(null, "Bed "+bed+" booked successfully!
Contact: "+arr[--i]+"/"+arr[--i]+" for more details...");
        }
        try{

    sql = "update hospital set available_beds = available_beds - 1 where reg_no=?";
    ps = con.prepareStatement(sql);
    ps.setString(1, reg);
    ps.executeUpdate();
    dispose();
    User uru = new User(usn);
    uru.setVisible(true);
    }catch(SQLException e){JOptionPane.showMessageDialog(null, e);}
    }
   }catch(SQLException e){JOptionPane.showMessageDialog(null, "Bed already
booked for the entered aadhar number!");}

    }
  }
(User verification with captcha like security):
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        if(signup == false){
Connection con = CovidManagement.connecter();
    String sql = "SELECT * FROM user WHERE user_name=? AND password=?";
    PreparedStatement ps = null;
  try {
    ps = con.prepareStatement(sql);
```

```java
                ps.setString(1, Username_Input1.getText());
                ps.setString(2, Password_Input1.getText());
                ResultSet rs = ps.executeQuery();
                if(rs.next()){
                    int k1 = new Random().nextInt(20);
                    int k2 = new Random().nextInt(20);
                   String ans = JOptionPane.showInputDialog(null, "Enter "+k1+"+"+k2+":");
                   if(ans != null){
                      int a = Integer.parseInt(ans);
                      if(a == (k1+k2)){
                      JOptionPane.showMessageDialog(null, "Access Granted!");
                      String t = Username_Input1.getText();
                      dispose();
                      User uss = new User(t);
                      uss.setVisible(true);
                      }else{JOptionPane.showMessageDialog(null, "Access Denied!");}
                   }
                  }
              else{
                   JOptionPane.showMessageDialog(null, "Incorrect Credentials! Try again Or
Sign Up!");
                   Username_Input1.setText("");
                   Password_Input1.setText(""); }
            } catch (SQLException ex) {
               JOptionPane.showMessageDialog(null, "Username already exists!");
          }
       }
           else{
                Connection con = CovidManagement.connecter();
              String sql = "INSERT INTO user(user_name,password) VALUES(?,?)";
              PreparedStatement ps = null;
           try {
              ps = con.prepareStatement(sql);
              ps.setString(1, Username_Input1.getText());
              ps.setString(2, Password_Input1.getText());
              if(ps.execute()){
                 JOptionPane.showMessageDialog(null, "Error occurred");
              }
              else{
                 JOptionPane.showMessageDialog(null, "Credentials entered successfully!");
```
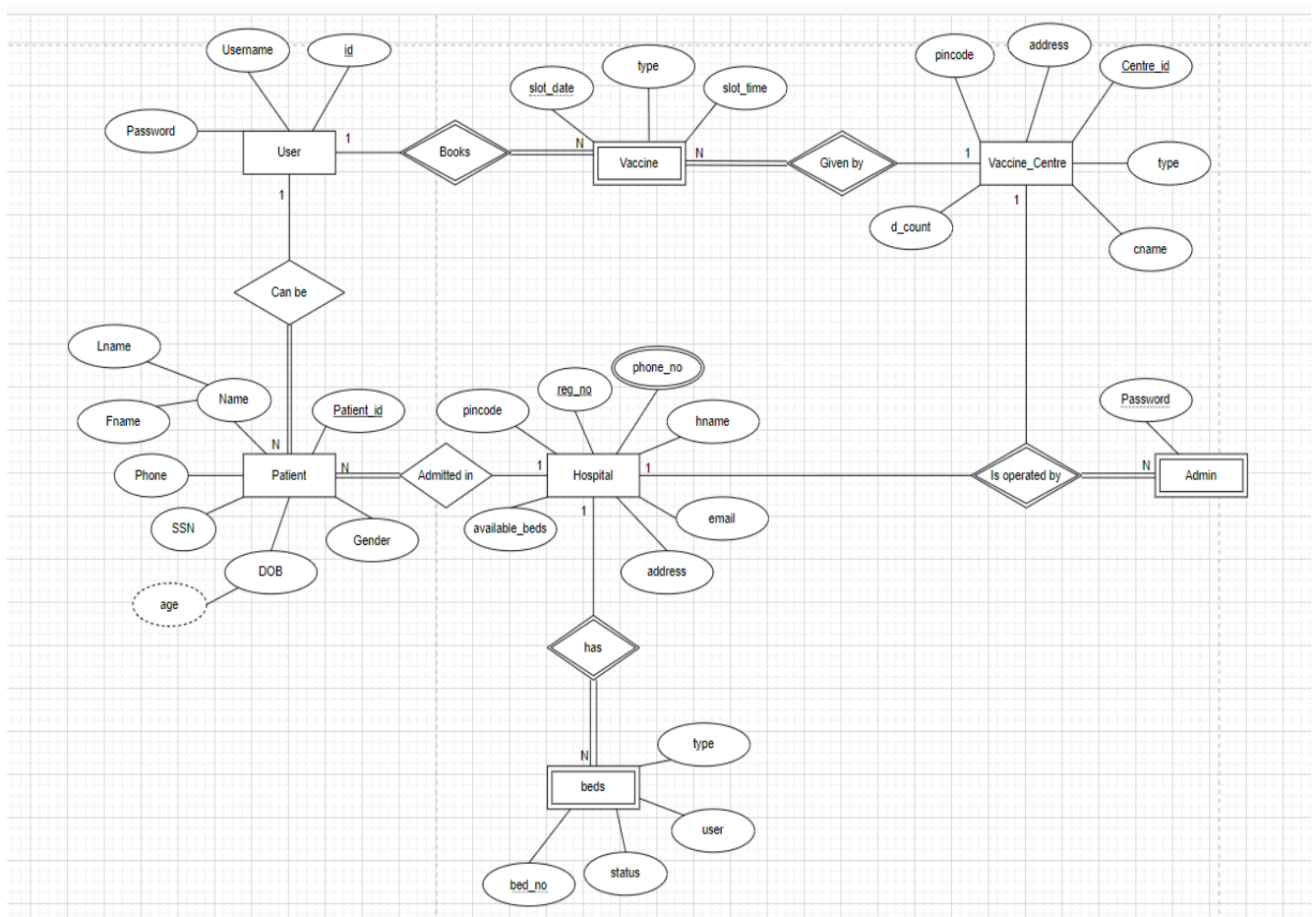
```
        }
    } catch (SQLException ex) {
        JOptionPane.showMessageDialog(null, "Username already exists!");
    }

        Sign_Up_Btn.setVisible(true);
        jLabel1.setVisible(true);
        jLabel2.setVisible(false);
        signup = false;
        Username_Input1.setText("");
        Password_Input1.setText("");}
    }
```
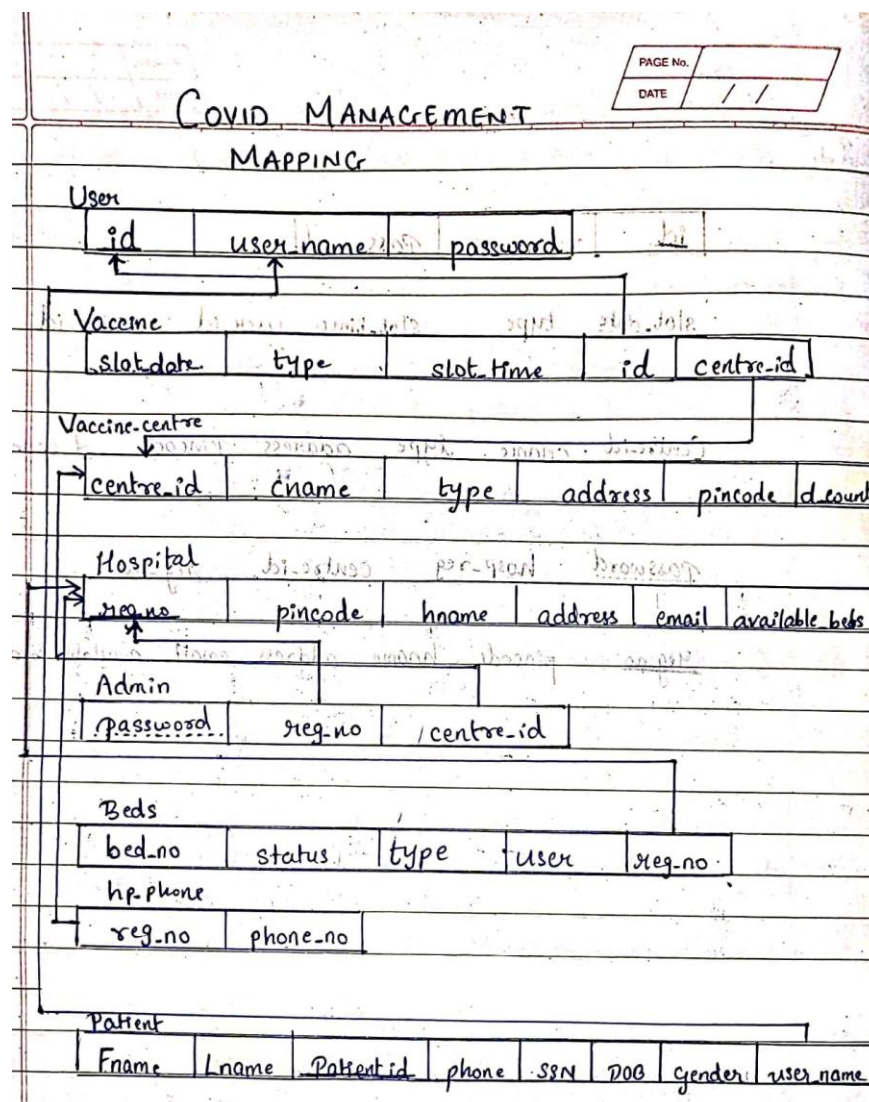
ER Diagram:

Mapping:

COVID MANAGEMENT MAPPING

User

id	user-name	password	

Vaccine

slot-date	type	slot-time	id	centre-id

Vaccine-centre

centre_id	cname	type	address	pincode	d_count

Hospital

reg-no	pincode	hname	address	email	available_beds

Admin

password	reg-no	centre-id

Beds

bed-no	status	type	user	reg-no

hp-phone

reg-no	phone-no

Patient

Fname	Lname	Patient id	phone	SSN	DOB	gender	user_name

Connectivity Code:

```
static Connection connecter(){
    Connection con = null;
    try{
        con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/JDproject?user=root&password=mysql@2003");
    }
    catch(Exception e){
        JOptionPane.showMessageDialog(null, e);
    }
    return con;
  }
```

Table with rows:

DESC user;

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
user_name	varchar(45)	NO	UNI	NULL	
password	varchar(45)	NO		NULL	

Select * from user;

	id	user_name	password
▶	12	temp	pass
*	NULL	NULL	NULL

DESC patient;

Field	Type	Null	Key	Default	Extra
patient_id	int	NO	PRI	NULL	auto_increment
lname	varchar(45)	NO		NULL	
fname	varchar(45)	NO		NULL	
dob	date	NO		NULL	
gender	varchar(10)	NO		NULL	
SSN	decimal(12,0)	NO	UNI	NULL	
user_name	varchar(45)	NO	MUL	NULL	
phone	decimal(10,0)	YES		NULL	
age	int	YES		NULL	

Select * from patient;

	patient_id	fname	lname	dob	gender	SSN	user_name	phone	age
▶	1	Temp	pass	2022-01-29	Male	123456789123	temp	1234567890	0
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

DESC vaccine;

Field	Type	Null	Key	Default	Extra
id	int	NO	MUL	NULL	
type	varchar(20)	YES		NULL	
slot_date	date	YES		NULL	
slot_time	varchar(20)	YES		NULL	
centre_id	int	YES	MUL	NULL	

select * from vaccine;

	id	type	slot_date	slot_time	centre_id
▶	12	Covishield	2022-01-30	10-12	7

DESC vaccine_centre;

Field	Type	Null	Key	Default	Extra
centre_id	int	NO	PRI	NULL	auto_increment
type	varchar(20)	NO		NULL	
cname	varchar(45)	NO		NULL	
address	varchar(100)	NO		NULL	
pincode	int	NO		NULL	
d_count	int	YES		NULL	

select * from vaccine_centre;

centre_id	type	cname	address	pincode	d_count
1	covishield	SRV Hospital	179, Kamal Charan Building, 180, Rd Number 2,...	400062	200
2	covaxin	Suvidha Hospital & Polyclinic	275, Rd Number 3, Jawahar Nagar, Goregaon ...	400104	200
3	covishield	Dr. Rane Hospital	Station Rd, Sanjay Gandhi Nagar, Gandhi Nagar...	400060	200
4	covaxin	Aditya Nursing Home Andheri west	Aditya nursing home Barda wadi, Andheri West	400058	200
5	covishield	Kokilaben Dhirubhai Ambani Hospital	Rao Saheb, Achutrao Patwardhan Marg, Four ...	400053	200
6	covaxin	Lion Kartar Singh Hospital	1st Floor, 6- B, Dadabhai Cross Rd, near Navra...	400009	200
7	covishield	S.K. Patil Mahanagarpalika General Hospital	Daftary Road, Malkani Estate, Pushpa Park, Mal...	400097	199
8	covaxin	DNA Multispeciality Hospital	2, Whispering Palms Shopping Complex Akurli R...	400101	200
9	covishield	Thunga Hospital	Opp. Nirman Hitech Diagnostics, Goraswadi Lan...	400064	200
10	covaxin	Shree Naminath Jain Foundation	Mahavir Nagar, Borivali	400066	200
11	covishield	BKC JUMBO COVID FACILITY 1	MMRDA GROUND BKC MUMBAI, Mumbai	400051	200
12	covaxin	SOMAIYA JUMBO CENTRE SION	Sion Somaiya Jumbo Covid Centre Somaiya Gro...	400022	200
13	covishield	AMEYA SURGICAL AND GENERAL NHF	23 Ajit Nagar J.B. Nagar Andheri East	400059	200
14	covaxin	WELLSPRING HEALTHCARE CENTRE	WELLNESS HEALTHSPRING CENTRE SHOP NO. ...	400005	200
15	covishield	DR ALVAS DIAGNOSTIC CENTRE	113 Prabhadevi Industrial Estate Next To Kohin...	400025	200
16	covaxin	JASLOK HOSPITAL 1	15 Dr G Deshmukh Marg Peddar Road Mumbai, ...	400026	200
17	covishield	BALAJI HEART HOSPITAL	BYCULLA Cross Lane III Victoria Road Byculla East	400027	200
18	covaxin	HOLY SPIRIT HOSPITAL 1	Mahakali Caves Rd Sher E Punjab Colony Andhe...	400093	200
19	covishield	MY AAROGYA CENTER	Building No 53 Radheshyam Soc. Opp. MIG. Crik...	400061	200
20	covaxin	AXON HOSPITAL	Pranik Chamber Building 5 Th Floor A Wing Sakiv...	400072	200
NULL	NULL	NULL	NULL	NULL	NULL

Desc admin;

Field	Type	Null	Key	Default	Extra
reg_no	int	YES	MUL	NULL	
password	varchar(45)	YES		NULL	
centre_id	int	YES	MUL	NULL	

Select * from admin;

reg_no	password	centre_id
1	pass	1
2	pass	2
3	pass	3
4	pass	4
5	pass	5
6	pass	6
7	pass	7
8	pass	8
9	pass	9
10	pass	10
11	pass	11
12	pass	12
13	pass	13
14	pass	14
15	pass	15
16	pass	16
17	pass	17
18	pass	18
19	pass	19
20	pass	20
21	pass	NULL
22	pass	NULL

DESC beds;

Field	Type	Null	Key	Default	Extra
reg_no	int	NO	MUL	NULL	
bed_no	int	NO		NULL	
type	varchar(20)	NO		NULL	
status	varchar(2)	NO		NULL	
user	varchar(45)	YES	MUL	NULL	

Select* from beds;

reg_no	bed_no	type	status	user
1	101	NORMAL	A	
1	102	NORMAL	A	
1	201	ICU	A	
1	202	ICU	A	
1	301	COVID	A	
1	302	COVID	A	
1	401	O2	A	
1	402	O2	A	
1	501	NON-O2	A	
1	502	NON-O2	A	
2	101	NORMAL	A	
2	102	NORMAL	A	
2	201	ICU	A	
2	202	ICU	A	
2	301	COVID	A	
2	302	COVID	A	
2	401	O2	A	
2	402	O2	A	
2	501	NON-O2	A	
2	502	NON-O2	A	
3	101	NORMAL	A	
3	102	NORMAL	A	
3	201	ICU	A	
3	202	ICU	A	
3	301	COVID	A	
3	302	COVID	A	
3	401	O2	A	
3	402	O2	A	
3	501	NON-O2	A	
3	502	NON-O2	A	
4	101	NORMAL	A	
4	102	NORMAL	A	
4	201	ICU	A	
4	202	ICU	A	
4	301	COVID	A	
4	302	COVID	A	
4	401	O2	A	
4	402	O2	A	
4	501	NON-O2	A	
4	502	NON-O2	A	
5	101	NORMAL	A	
5	102	NORMAL	A	
5	201	ICU	A	
5	202	ICU	A	
5	301	COVID	A	
5	302	COVID	A	
5	401	O2	A	
5	402	O2	A	
5	501	NON-O2	A	
5	502	NON-O2	A	
6	101	NORMAL	A	
6	102	NORMAL	A	
6	201	ICU	A	
6	202	ICU	A	
6	301	COVID	A	
6	302	COVID	A	
6	401	O2	A	
6	402	O2	A	
6	501	NON-O2	A	
6	502	NON-O2	A	
7	101	NORMAL	A	
7	102	NORMAL	A	
7	201	ICU	A	
7	202	ICU	A	
7	301	COVID	A	
7	302	COVID	A	

reg_no	bed_no	type	status	user
7	401	O2	A	
7	402	O2	A	
7	501	NON-O2	A	
7	502	NON-O2	A	
8	101	NORMAL	A	
8	102	NORMAL	A	
8	201	ICU	A	
8	202	ICU	A	
8	301	COVID	A	
8	302	COVID	A	
8	401	O2	A	
8	402	O2	A	
8	501	NON-O2	A	
8	502	NON-O2	A	
9	101	NORMAL	A	
9	102	NORMAL	A	
9	201	ICU	A	
9	202	ICU	A	
9	301	COVID	A	
9	302	COVID	A	
9	401	O2	A	
9	402	O2	A	
9	501	NON-O2	A	
9	502	NON-O2	A	

10	101	NORMAL	A	
10	102	NORMAL	A	
10	201	ICU	A	
10	202	ICU	A	
10	301	COVID	A	
10	302	COVID	A	
10	401	O2	A	
10	402	O2	A	
10	501	NON-O2	A	
10	502	NON-O2	NA	temp

11	101	NORMAL	A	NULL
11	102	NORMAL	A	NULL
11	201	ICU	A	NULL
11	202	ICU	A	NULL
11	301	COVID	A	NULL
11	302	COVID	A	NULL
11	401	O2	A	NULL
11	402	O2	A	NULL
11	501	NON-O2	A	NULL
11	502	NON-O2	A	NULL
12	101	NORMAL	A	NULL
12	102	NORMAL	A	NULL
12	201	ICU	A	NULL
12	202	ICU	A	NULL
12	301	COVID	A	NULL
12	302	COVID	A	NULL
12	401	O2	A	NULL
12	402	O2	A	NULL
12	501	NON-O2	A	NULL
12	502	NON-O2	A	NULL
13	101	NORMAL	A	NULL
13	102	O2	A	NULL
13	201	ICU	A	NULL
13	202	COVID	A	NULL
14	101	COVID	A	NULL
14	102	COVID	A	NULL
14	201	NORMAL	A	NULL
14	202	NORMAL	A	NULL
15	101	COVID	A	NULL
15	102	O2	A	NULL
15	201	NON-O2	A	NULL
15	202	COVID	A	NULL

16	101	COVID	A	NULL
16	102	CICU	A	NULL
16	201	NORMAL	A	NULL
16	202	O2	A	NULL
17	101	COVID	A	NULL
17	102	COVID	A	NULL
17	201	NORMAL	A	NULL
17	202	O2	A	NULL
18	101	COVID	A	
18	102	COVID	A	
18	201	COVID	A	
18	202	NORMAL	A	NULL
19	101	COVID	A	NULL
19	102	COVID	A	NULL
19	201	ICU	A	NULL
19	202	NON-O2	A	NULL
20	101	COVID	A	NULL
20	102	COVID	A	NULL
20	201	NORMAL	A	NULL
20	202	ICU	A	NULL
21	101	COVID	A	NULL
21	102	COVID	A	NULL
21	201	COVID	A	NULL
21	202	NORMAL	A	NULL
22	101	NORMAL	A	NULL
22	102	O2	A	NULL
22	201	ICU	A	NULL
22	202	NON-O2	A	NULL

DESC hp_phone;

Field	Type	Null	Key	Default	Extra
reg_no	int	NO	MUL	NULL	
phone_no	int	NO		NULL	

Select* from hp_phone;

reg_no	phone_no
1	23671888
1	23672888
2	23803672
2	23805898
3	25763333
3	25763300
4	265281000
5	66573333
6	24136051
7	66986666
8	24177600
9	24452222
9	24449199
10	24443893
11	25915777
12	24177000
12	24146750
13	67994444
14	30999999
15	26267500
16	20385862
17	67676767
18	66529999
19	67670101
20	67556755
21	66921000
22	26751000

DESC hospital;

Field	Type	Null	Key	Default	Extra
reg_no	int	NO	PRI	NULL	
hname	varchar(50)	NO		NULL	
address	varchar(100)	NO		NULL	
pincode	int	NO		NULL	
email	varchar(45)	NO	UNI	NULL	
available_beds	int	YES		NULL	

Select * from hospital;

reg_no	hname	address	pincode	email	available_beds
1	Breach Candy Hospital	60-A Bhulabhai Desai Road	400026	info@breachcandyhospital.org	10
2	Cumballa Hill Hospital & Heart Institute	ugust Kranti Marg	400036	chh@vsnl.com	10
3	Dr. L H Hiranandani Hospital	Hiranandani Gardens, Powai	400076	wecare@hiranandanihospital.org	10
4	IPC Heart Care Centre	Raghuvanshi Mill Compound, Lower Parel	400013	pratiksha@ipc-india.com	10
5	Jaslok Hospital	Dr. Deshmukh Marg, Pedder Road	400026	info@jaslokhospital.net	10
6	King Edward Memorial Hospital	Acharya Donde Marg, Parel	400012	websitecontact@kem.edu	10
7	Asian Heart Institute	Bandra Kurla Complex, Bandra (E)	400051	info@ahirc.com	10
8	Aditya Jyot Eye Care Hospital	Major Parmeshwaran Road, Wadala	400031	ajeh@vsnl.com	10
9	P. D. Hinduja National Hospital	Veer Savarkar Marg, Mahim	400016	info@hindujahospital.com	10
10	My Aarogya Medical Center	Raheja Rugnalaya Marg, Mahim	400016	info@amc.in	9
11	R G Stone Urology Centre	Valiji Ladha Road, Mulund (W)	400080	info@rgsuc.in	10
12	Tata Memorial Hospital	Dr. E Borges Road, Parel	400012	tmcit1@vsnl.com	10
13	Wockhardt Hospital	Mulund Goregaon Link Road	400011	help@whosp.com	4
14	Kokilaben Dhirubhai Ambani Hospital	Four Bunglows, Andheri (W)	400053	info@kdah.com	4
15	Nanavati Hospital	Vile Parle (W)	400056	marketing@nanavatihospital.org	4
16	Fortis Hospital	Mulund (W)	400078	fortis@mumbai.in	4
17	Seven Hill Hospital	Andheri (E)	400059	response@sevenhillshospital.com	4
18	SL Raheja Hospital	Mahim (W)	400016	info@rahejhospital.com	4
19	Global Hospital	Parel	400012	info@globalhospital.in	4
20	Kohinoor Hospital	Kurla (W)	400070	info@kohinoorhospitals.in	4
21	Shroff Eye Hospital	S. V. Road, Bandra (W)	400050	safalashroff@lasikindia.in	4
22	Lilavati Hospital	Bandra Reclamation	400050	info@lilavatihospital.com	4
NULL	NULL	NULL	NULL	NULL	NULL