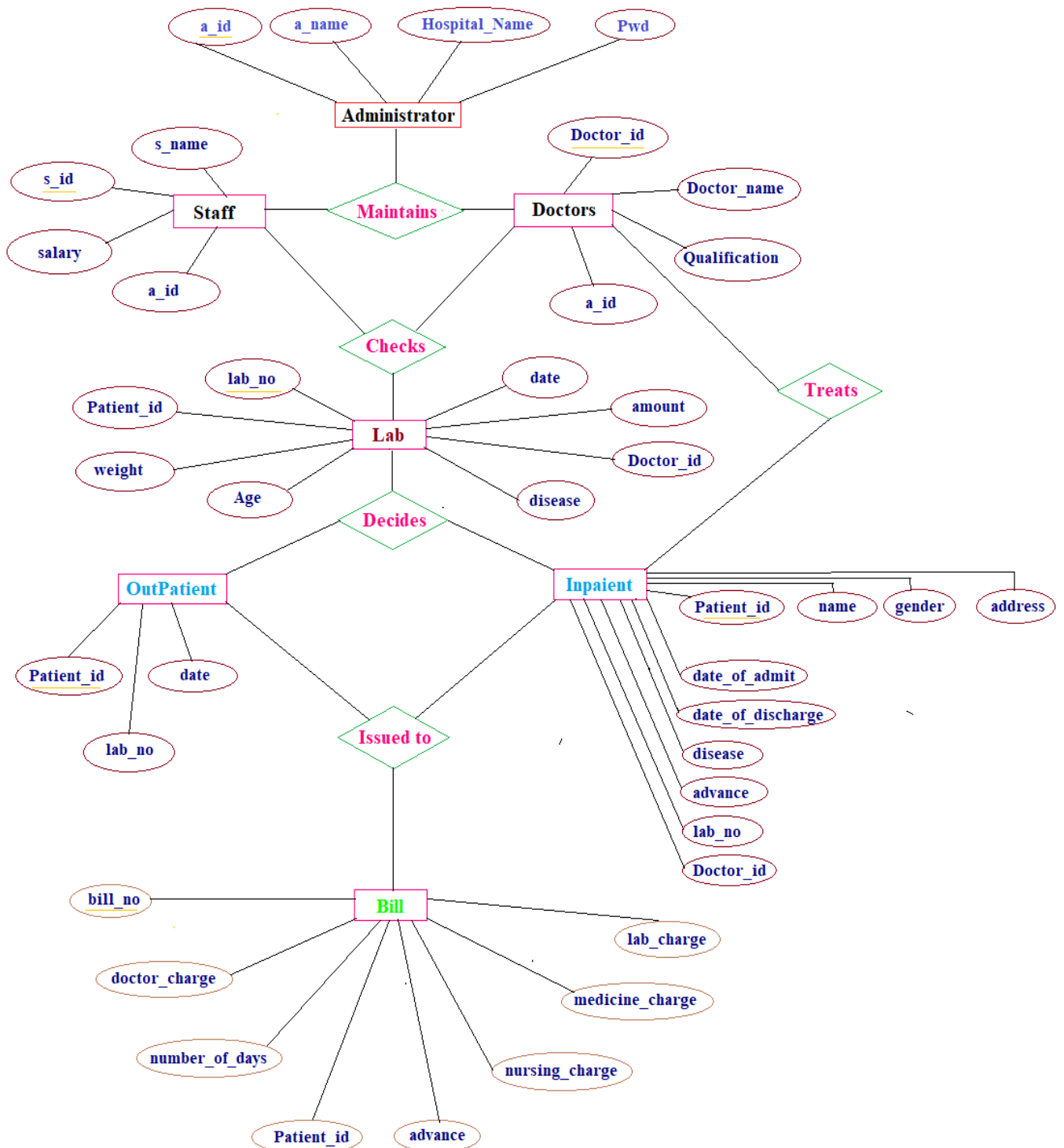
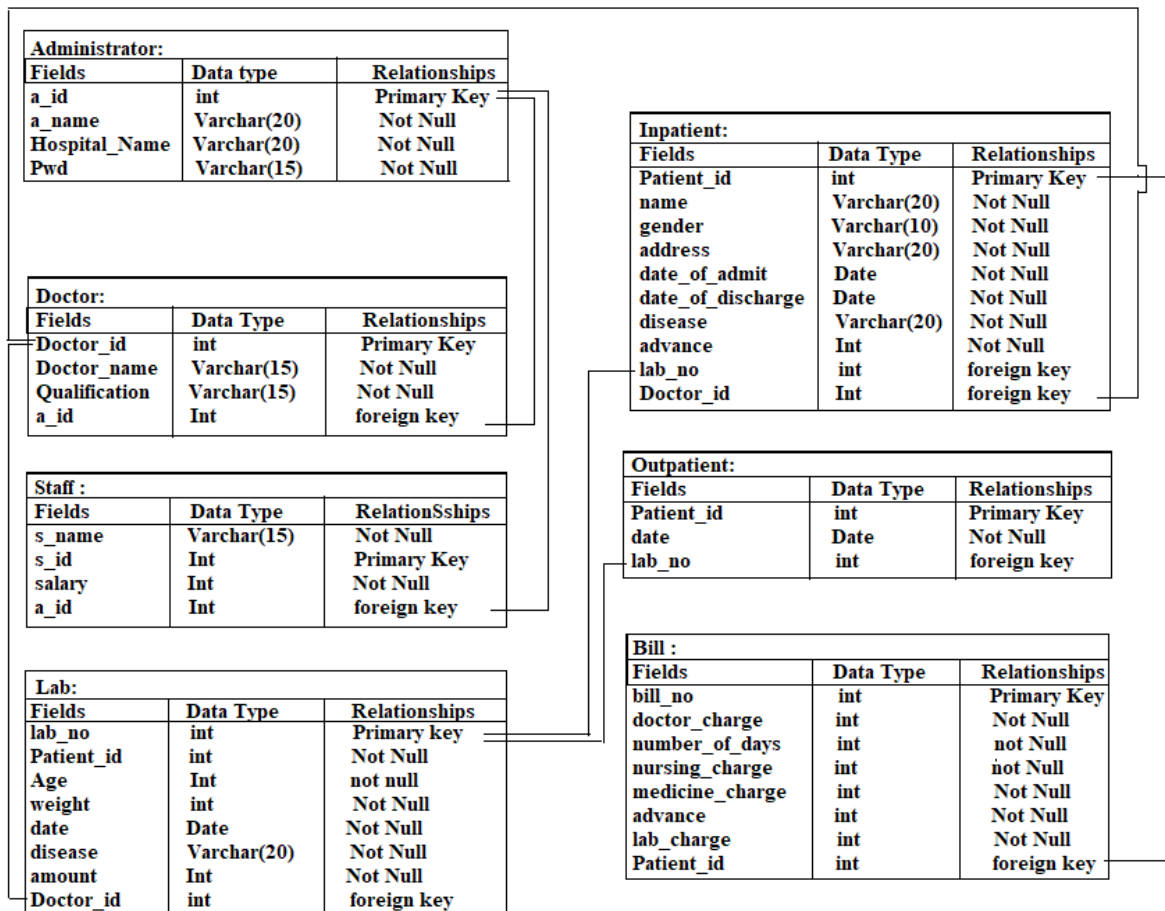


5.0 Outcome of micro project.

- ER Diagram.



- **Schema & Relations Diagram:**



- **Actual Project Creation using SQL queries:**

1.Database creation-

```
Create Database HMS_db;
use HMS_db;
```

2.Tables in Database-

```
Create table Administrator(a_id int Primary Key,a_name Varchar(20) Not
Null,Hospital_Name Varchar(20),Pwd Varchar(15),CHECK (Pwd IN
("NS_T_H+_dbase")));
```

```
Create table Doctor(Doctor_id int Primary Key,Doctor_name Varchar(15) Not
Null,Qualification Varchar(15) Not Null,a_id Int,
foreign key(a_id) references Administrator(a_id) on delete cascade);
```

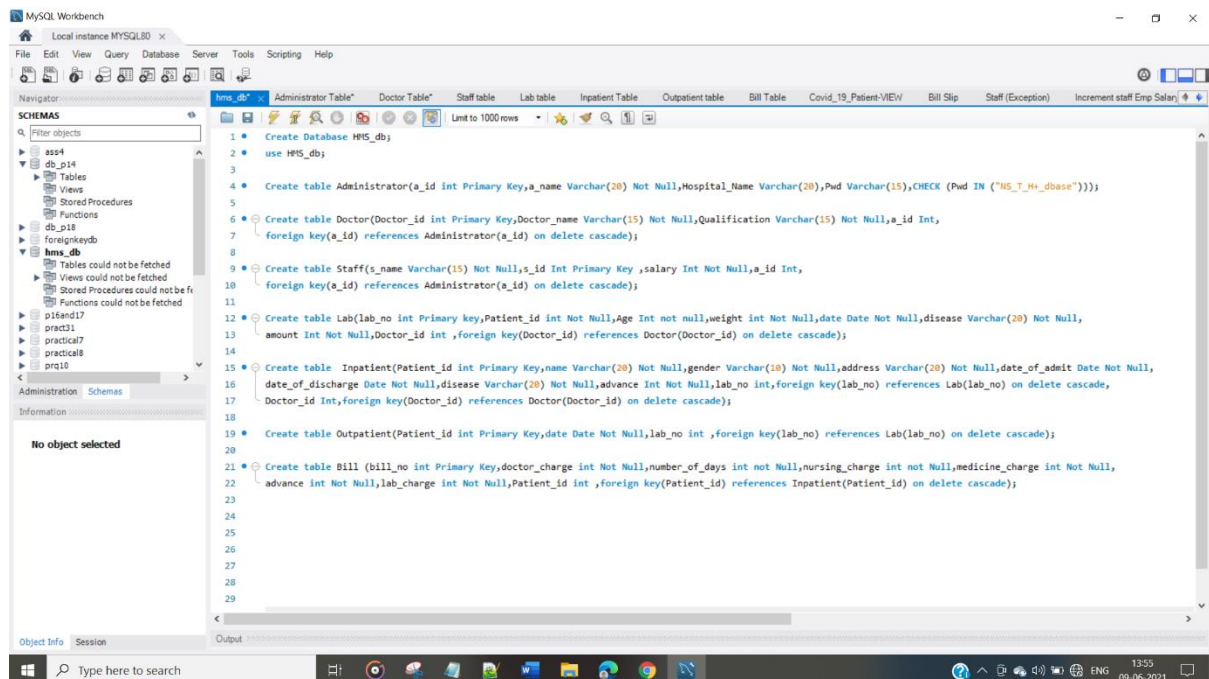
Create table Staff(s_name Varchar(15) Not Null,s_id Int Primary Key ,salary Int Not Null,a_id Int,
foreign key(a_id) references Administrator(a_id) on delete cascade);

Create table Lab(lab_no int Primary key,Patient_id int Not Null,Age Int not null,weight int Not Null,date Date Not Null,disease Varchar(20) Not Null,
amount Int Not Null,Doctor_id int ,foreign key(Doctor_id) references Doctor(Doctor_id) on delete cascade);

Create table Inpatient(Patient_id int Primary Key,name Varchar(20) Not Null,gender Varchar(10) Not Null,address Varchar(20) Not Null,date_of_admit Date Not Null,
date_of_discharge Date Not Null,disease Varchar(20) Not Null,advance Int Not Null,lab_no int,foreign key(lab_no) references Lab(lab_no) on delete cascade,
Doctor_id Int,foreign key(Doctor_id) references Doctor(Doctor_id) on delete cascade);

Create table Outpatient(Patient_id int Primary Key,date Date Not Null,lab_no int ,foreign key(lab_no) references Lab(lab_no) on delete cascade);

Create table Bill (bill_no int Primary Key,doctor_charge int Not Null,number_of_days int not Null,nursing_charge int not Null,medicine_charge int Not Null,
advance int Not Null,lab_charge int Not Null,Patient_id int ,foreign key(Patient_id) references Inpatient(Patient_id) on delete cascade);



3. Insert Records in Administrator table-

The screenshot shows the MySQL Workbench interface with the following SQL queries in the editor:

```
1 use hms_db;
2 /*Add column In Administrator Table */
3 Alter Table Administrator
4 add column gender Varchar(10) Not Null;
5
6 Insert into Administrator Values(100,"Nilesh Sabale","Tech_Healths","NS_T_H+_dbase","Male");
7
8 Select * from Administrator;
```

The Result Grid shows the output of the queries:

#	Time	Action	Message	Duration / Fetch
6	13:46:50	use hms_db	0 row(s) affected	0.000 sec
7	13:47:01	Alter Table Administrator add column gender Varchar(10) Not Null	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.031 sec
8	13:47:06	Insert into Administrator Values(100,"Nilesh Sabale","Tech_Healths","NS_T_H+_dbase","Male")	1 row(s) affected	0.016 sec
9	13:47:10	Select * from Administrator LIMIT 0.1000	1 row(s) returned	0.000 sec / 0.000 sec

The Information tab shows the structure of the Administrator table:

a_id	a_name	Hospital_Name	Prod	gender
100	Nilesh Sabale	Tech_Healths	NS_T_H+_dbase	Male

4. Insert Records in Doctor table

The screenshot shows the MySQL Workbench interface with the following SQL queries in the editor:

```
1 use hms_db;
2 Insert into Doctor Values(43,"Meher Atharva","MBBS",100);
3 Insert into Doctor Values(44,"Gorde Sangam","MD",100);
4 Insert into Doctor Values(45,"Sasane Aditya","BHMS",100);
5 Insert into Doctor Values(46,"Savale Tejal","MBBS",100);
6 Insert into Doctor Values(47,"Shedage Avadhut","MBBS",100);
7 Insert into Doctor Values(48,"Selake Pranav","BHMS",100);
8 Select * from Doctor;
```

The Result Grid shows the output of the queries:

#	Time	Action	Message	Duration / Fetch
11	13:50:50	use hms_db	0 row(s) affected	0.000 sec
12	13:50:52	Insert into Doctor Values(43,"Meher Atharva","MBBS",100)	1 row(s) affected	0.015 sec
13	13:50:55	Insert into Doctor Values(44,"Gorde Sangam","MD",100)	1 row(s) affected	0.032 sec
14	13:50:58	Insert into Doctor Values(45,"Sasane Aditya","BHMS",100)	1 row(s) affected	0.015 sec
15	13:51:00	Insert into Doctor Values(46,"Savale Tejal","MBBS",100)	1 row(s) affected	0.015 sec
16	13:51:02	Insert into Doctor Values(47,"Shedage Avadhut","MBBS",100)	1 row(s) affected	0.000 sec
17	13:51:04	Insert into Doctor Values(48,"Selake Pranav","BHMS",100)	1 row(s) affected	0.000 sec
18	13:51:16	Select * from Doctor LIMIT 0.1000	6 row(s) returned	0.000 sec / 0.000 sec

The Information tab shows the structure of the Doctor table:

Doctor_id	Doctor_name	Qualification	a_id
43	Meher Atharva	MBBS	100
44	Gorde Sangam	MD	100
45	Sasane Aditya	BHMS	100
46	Savale Tejal	MBBS	100
47	Shedage Avadhut	MBBS	100
48	Selake Pranav	BHMS	100

5. Insert Records in Staff table-

The screenshot shows the MySQL Workbench interface with the 'Staff table' selected in the 'hms_db' database. The SQL editor contains the following queries:

```
1 use hms_db;
2 Insert into Staff values("Harish S.",111,10000,100);
3 Insert into Staff values("Nitin P.",112,12000,100);
4 Insert into Staff values("Avi P.",113,15000,100);
5 Insert into Staff values("Alka P.",114,18000,100);
6 Insert into Staff values("Ashu L.",115,9000,100);
7 Insert into Staff values("Shubh K.",116,20000,100);
8 Insert into Staff values("Dips G.",117,30000,100);
9 Select * from Staff;
```

The 'Result Grid' displays the data inserted into the Staff table:

s_name	s_id	salary	a_id
Harish S.	111	10000	100
Nitin P.	112	12000	100
Avi P.	113	15000	100
Alka P.	114	18000	100
Ashu L.	115	9000	100
Shubh K.	116	20000	100
Dips G.	117	30000	100

The 'Output' pane shows the execution log for the queries, indicating successful insertions and the final select query result.

6. Insert Records in Lab table-

The screenshot shows the MySQL Workbench interface with the 'Lab table' selected in the 'hms_db' database. The SQL editor contains the following queries:

```
1 Use hms_db;
2 Insert into lab Values(1,1111,19,66,"2021-05-01","Fever",5000,43);
3 Insert into lab Values(2,2222,18,64,"2021-05-08","Cold",500,48);
4 Insert into lab Values(3,3333,88,56,"2021-05-09","Flue",10000,46);
5 Insert into lab Values(4,4444,40,80,"2021-05-10","Flue",5000,46);
6 Insert into lab Values(5,5555,30,70,"2021-05-20","Cough",1000,45);
7 Insert into lab Values(6,6666,90,56,"2021-05-21","Body Pain",300,47);
8 Insert into lab Values(7,7777,55,90,"2021-05-22","Covid-19",50000,44);
9 Insert into lab Values(8,8888,48,99,"2021-05-30","Covid-19",55000,44);
10 Insert into lab Values(9,9999,80,77,"2021-06-12","Covid-19",1000,44);
11 Select * from lab;
```

The 'Result Grid' displays the data inserted into the Lab table:

lab_no	Patient_id	Age	weight	date	disease	amount	Doctor_id
1	1111	19	66	2021-05-01	Fever	5000	43
2	2222	18	64	2021-05-08	Cold	500	48
3	3333	88	56	2021-05-09	Flue	10000	46
4	4444	40	80	2021-05-10	Flue	5000	46
5	5555	30	70	2021-05-20	Cough	1000	45
6	6666	90	56	2021-05-21	Body Pain	300	47
7	7777	55	90	2021-05-22	Covid-19	50000	44
8	8888	48	99	2021-05-30	Covid-19	55000	44

The 'Output' pane shows the execution log for the queries, indicating successful insertions and the final select query result.

7. Insert Records in Inpatient table-

The screenshot shows the MySQL Workbench interface with the following SQL queries in the editor:

```
1 * Use HMS_db;
2 * Insert into Inpatient Values(1111,"Aditya K.", "Male", "At:Paithan", '2021-05-01', '2021-05-20', "Fever", 1000, 1, 43);
3 * Insert into Inpatient Values(2222,"Pratik B.", "Male", "At:Alkoti", '2021-05-08', '2021-05-18', "Cold", 1000, 2, 40);
4 * Insert into Inpatient Values(3333,"Anu B.", "Female", "At:Belhe", '2021-05-09', '2021-05-20', "Flue", 10000, 3, 46);
5 * Insert into Inpatient Values(4444,"Sonu P.", "Female", "At:Naval", '2021-05-10', '2021-05-22', "Flue", 10000, 4, 46);
6 * Insert into Inpatient Values(5555,"Sahil G.", "Male", "At:Darodi", '2021-05-20', '2021-05-26', "Cough", 1000, 5, 45);
7 * Insert into Inpatient Values(6666,"Sumit K.", "Male", "At:Loni", '2021-05-21', '2021-05-30', "Body Pain", 1000, 6, 47);
8 * Insert into Inpatient Values(7777,"Anil B.", "Male", "At:Alle", '2021-05-22', '2021-06-20', "Covid-19", 20000, 7, 44);
9 * Insert into Inpatient Values(8888,"Sanket K.", "Male", "At:Pabal", '2021-05-30', '2021-06-20', "Covid-19", 20000, 8, 44);
10 * Insert into Inpatient Values(9999,"Amar.", "Male", "At:Randhe", '2021-06-12', '2021-06-30', "Covid-19", 20000, 9, 44);
11 * Select * from Inpatient;
```

The Result Grid shows the data after execution:

Patient_id	name	gender	address	date_of_admit	date_of_discharge	disease	advance	lab_no	Doctor_id
1111	Aditya K.	Male	At:Paithan	2021-05-01	2021-05-20	Fever	1000	1	43
2222	Pratik B.	Male	At:Alkoti	2021-05-08	2021-05-18	Cold	1000	2	40
3333	Anu B.	Female	At:Belhe	2021-05-09	2021-05-20	Flue	10000	3	46
4444	Sonu P.	Female	At:Naval	2021-05-10	2021-05-22	Flue	10000	4	46
5555	Sahil G.	Male	At:Darodi	2021-05-20	2021-05-26	Cough	1000	5	45
6666	Sumit K.	Male	At:Loni	2021-05-21	2021-05-30	Body Pain	1000	6	47
7777	Anil B.	Male	At:Alle	2021-05-22	2021-06-20	Covid-19	20000	7	44
8888	Sanket K.	Male	At:Pabal	2021-05-30	2021-06-20	Covid-19	20000	8	44
9999	Amar.	Male	At:Randhe	2021-06-12	2021-06-30	Covid-19	20000	9	44

The Action Output shows the execution results:

#	Time	Action	Message	Duration / Fetch
48	14:04:41	Insert into Inpatient Values(6666,"Sumit K.", "Male", "At:Loni", '2021-05-21', '2021-05-30', "Body Pain", 1000...	1 row(s) affected	0.000 sec
49	14:04:44	Insert into Inpatient Values(7777,"Anil B.", "Male", "At:Alle", '2021-05-22', '2021-06-20', "Covid-19", 20000...	1 row(s) affected	0.000 sec
50	14:04:46	Insert into Inpatient Values(8888,"Sanket K.", "Male", "At:Pabal", '2021-05-30', '2021-06-20', "Covid-19", 200...	1 row(s) affected	0.000 sec
51	14:04:47	Insert into Inpatient Values(9999,"Amar.", "Male", "At:Randhe", '2021-06-12', '2021-06-30', "Covid-19", 20000...	1 row(s) affected	0.000 sec
52	14:04:50	Select * from Inpatient LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec

8. Insert Records in Outpatient table-

The screenshot shows the MySQL Workbench interface with the following SQL queries in the editor:

```
1 * Use HMS_db;
2 * Insert Into Outpatient Values(9999, '2021-06-30', 9);
3 * Insert Into Outpatient Values(6666, '2021-05-30', 6);
4 * Insert Into Outpatient Values(4444, '2021-05-22', 4);
5 * Select * from Outpatient;
```

The Result Grid shows the data after execution:

Patient_id	date	lab_no
4444	2021-05-22	4
6666	2021-05-30	6
9999	2021-06-30	9

The Action Output shows the execution results:

#	Time	Action	Message	Duration / Fetch
54	14:05:55	Use HMS_db	0 row(s) affected	0.031 sec
55	14:05:58	Insert Into Outpatient Values(9999, '2021-06-30', 9)	1 row(s) affected	0.000 sec
56	14:06:00	Insert Into Outpatient Values(6666, '2021-05-30', 6)	1 row(s) affected	0.000 sec
57	14:06:03	Insert Into Outpatient Values(4444, '2021-05-22', 4)	1 row(s) affected	0.016 sec
58	14:06:07	Select * from Outpatient LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec

9. Insert Records in Bill table-

The screenshot shows the MySQL Workbench interface with the following SQL queries in the editor:

```
1 * Use HMS_db;
2 * Insert into Bill Values(111,11000,50,30000,50000,1000,5000,1111);
3 * Insert into Bill Values(222,3000,10,4000,15000,1000,500,2222);
4 * Insert into Bill Values(333,3500,11,4200,16000,10000,10000,3333);
5 * Insert into Bill Values(444,4000,12,5000,17000,10000,5000,4444);
6 * Insert into Bill Values(555,1500,6,2000,7000,1000,1000,5555);
7 * Insert into Bill Values(666,2500,9,3500,14000,1000,300,6666);
8 * Insert into Bill Values(777,8000,29,20000,40000,20000,50000,7777);
9 * Insert into Bill Values(888,6500,21,18000,35000,20000,55000,8888);
10 * Insert into Bill Values(999,5500,18,16000,30000,20000,1000,9999);
11 * Select * from Bill;
```

The Result Grid shows the data inserted into the Bill table:

bill_no	doctor_charge	number_of_days	nursing_charge	medicine_charge	advance	lab_charge	Patient_id
111	11000	50	30000	50000	1000	5000	1111
222	3000	10	4000	15000	1000	500	2222
333	3500	11	4200	16000	10000	10000	3333
444	4000	12	5000	17000	10000	5000	4444
555	1500	6	2000	7000	1000	1000	5555
666	2500	9	3500	14000	1000	300	6666
777	8000	29	20000	40000	20000	50000	7777
888	6500	21	18000	35000	20000	55000	8888
999	5500	18	16000	30000	20000	1000	9999

The Action Output shows the execution results:

#	Time	Action	Message	Duration / Fetch
68	14:08:15	Insert into Bill Values(888,6500,21,18000,35000,20000,55000,8888)	1 row(s) affected	0.000 sec
69	14:08:17	Insert into Bill Values(999,5500,18,16000,30000,20000,1000,9999)	1 row(s) affected	0.000 sec
70	14:08:23	Select * from Bill LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec

10. User Creation and Granting privileges to User-

The screenshot shows the MySQL Workbench interface with the following SQL queries in the editor:

```
12 /* Create User */
13 * CREATE USER Singham IDENTIFIED BY 'NS_T_H+';
14 * Grant Select,insert
15 On hms_db.inpatient
16 To Singham;
17 * Revoke insert,select
18 On hms_db.inpatient
19 From Singham;
20 /*To view privileges in MySQL We use data dictionary*/
21 * Select * from information_schema.user_privileges;
22 * Select * from information_schema.user_privileges where grantee like "Singham%";
23 * SHOW GRANTS FOR Singham;
24 /*Drop user*/
25 * Drop user Singham;
```

The Result Grid shows the grants for Singham@%:

Grants for Singham@%
GRANT USAGE ON *.* TO 'Singham'@'%'
GRANT SELECT, INSERT ON 'hms_db'.'inpatient' TO 'Singham'@'%'

The Action Output shows the execution results:

#	Time	Action	Message	Duration / Fetch
71	14:14:58	use HMS_db	0 row(s) affected	0.016 sec
72	14:15:41	CREATE USER Singham IDENTIFIED BY 'NS_T_H+'	0 row(s) affected	0.062 sec
73	14:15:49	Grant Select,insert On hms_db.inpatient To Singham	0 row(s) affected	0.015 sec
74	14:16:09	SHOW GRANTS FOR Singham	2 row(s) returned	0.000 sec / 0.000 sec

11. Find count of doctors Qualification wise (Using Group by clause)

The screenshot shows the MySQL Workbench interface. The 'Doctor Table' is selected in the Navigator. The SQL editor contains the following query:

```
1 use HMS_db;
2 Insert into Doctor Values(43,'Meher Atharva','MBBS',100);
3 Insert into Doctor Values(44,'Gorde Sangam','MD',100);
4 Insert into Doctor Values(45,'Sasane Aditya','BAMS',100);
5 Insert into Doctor Values(46,'Savale Tejal','MBBS',100);
6 Insert into Doctor Values(47,'Shedage Avadhut','MBBS',100);
7 Insert into Doctor Values(48,'Selake Pranav','BAMS',100);
8 Select * from Doctor;
9
10
11 /*Use of Group by and order by clauses on Doctor table(Qualification)*/
12 Select Qualification, Count(Doctor_id) as 'No. of Doctors' from Doctor group by Qualification order by Count(Doctor_id);
13
14 /*Update Doctor info:*/
15 Update Doctor
16 set Doctor_name='Sasane Aditya' where Doctor_id=45;
17
```

The 'Result Grid' shows the output of the query:

Qualification	No. of Doctors
MD	1
BAMS	2
MBBS	3

The 'Output' pane shows the execution details: 76 14:20:12 use HMS_db, 0 rows affected, Duration / Fetch: 0.000 sec.

12. Find female patients in Inpatient table-

The screenshot shows the MySQL Workbench interface. The 'Inpatient Table' is selected in the Navigator. The SQL editor contains the following query:

```
1 Use HMS_db;
2 Insert into Inpatient Values(1111,'Aditya K.', 'Male', 'At:Paithan', '2021-05-01', '2021-05-20', 'Fever', 1000, 1, 43);
3 Insert into Inpatient Values(2222,'Pratik S.', 'Male', 'At:Alkoti', '2021-05-08', '2021-05-18', 'Cold', 1000, 3, 48);
4 Insert into Inpatient Values(3333,'Anu S.', 'Female', 'At:Belhe', '2021-05-09', '2021-05-20', 'Flue', 10000, 3, 46);
5 Insert into Inpatient Values(4444,'Sonu P.', 'Female', 'At:Naval', '2021-05-10', '2021-05-22', 'Flue', 10000, 4, 46);
6 Insert into Inpatient Values(5555,'Sahil G.', 'Male', 'At:Darodi', '2021-05-20', '2021-05-26', 'Cough', 1000, 5, 45);
7 Insert into Inpatient Values(6666,'Sumit K.', 'Male', 'At:Loni', '2021-05-21', '2021-05-30', 'Body Pain', 1000, 6, 47);
8 Insert into Inpatient Values(7777,'Anil S.', 'Male', 'At:Alle', '2021-05-22', '2021-06-20', 'Covid-19', 20000, 7, 44);
9 Insert into Inpatient Values(8888,'Sanket K.', 'Male', 'At:Pabal', '2021-05-30', '2021-06-20', 'Covid-19', 20000, 8, 44);
10 Insert into Inpatient Values(9999,'Amar.', 'Male', 'At:Randhe', '2021-06-12', '2021-06-30', 'Covid-19', 20000, 9, 44);
11 Select * from Inpatient;
12 Select * from Inpatient where Gender='Female';
```

The 'Result Grid' shows the output of the query:

Patient_id	name	gender	address	date_of_admit	date_of_discharge	disease	advance	lab_no	Doctor_id
3333	Anu B.	Female	At:Belhe	2021-05-09	2021-05-20	Flue	10000	3	46
4444	Sonu P.	Female	At:Naval	2021-05-10	2021-05-22	Flue	10000	4	46

The 'Output' pane shows the execution details: 77 14:20:23 Select Qualification, Count(Doctor_id) as 'No. of Doctors' from Doctor group by Qualification order by Count..., 3 row(s) returned, Duration / Fetch: 0.015 sec / 0.000 sec. 78 14:26:17 Select * from Inpatient where Gender='Female' LIMIT 0. 1000, 2 row(s) returned, Duration / Fetch: 0.000 sec / 0.000 sec.

13. Find patient from Inpatient table where date_of_admit Between '2021-05-08' and '2021-05-30'

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
1. Use HMS_db;
2. Insert into Inpatient Values(1111,"Aditya K.", "Male", "At:Paithan", '2021-05-01', '2021-06-20', "Fever", 1000, 1, 43);
3. Insert into Inpatient Values(2222,"Pratik B.", "Male", "At:Alkoti", '2021-05-08', '2021-05-18', "Cold", 1000, 2, 48);
4. Insert into Inpatient Values(3333,"Anu B.", "Female", "At:Belhe", '2021-05-09', '2021-05-20', "Flue", 10000, 3, 46);
5. Insert into Inpatient Values(4444,"Sonu P.", "Female", "At:Naval", '2021-05-10', '2021-05-22', "Flue", 10000, 4, 46);
6. Insert into Inpatient Values(5555,"Sahil G.", "Male", "At:Darodi", '2021-05-20', '2021-05-26', "Cough", 1000, 5, 45);
7. Insert into Inpatient Values(6666,"Sumit K.", "Male", "At:Loni", '2021-05-21', '2021-05-30', "Body Pain", 1000, 6, 47);
8. Insert into Inpatient Values(7777,"Anil B.", "Male", "At:Alle", '2021-05-22', '2021-06-20', "Covid-19", 20000, 7, 44);
9. Insert into Inpatient Values(8888,"Sanket K.", "Male", "At:Pabal", '2021-05-30', '2021-06-20', "Covid-19", 20000, 8, 44);
10. Insert into Inpatient Values(9999,"Amar.", "Male", "At:Randhe", '2021-06-12', '2021-06-30', "Covid-19", 20000, 9, 44);
11. Select * from Inpatient;
12. Select * from Inpatient where Gender="Female";
13. Select * from Inpatient where date_of_admit Between '2021-05-08' and '2021-05-30';
14. /*Save Change Permanent */
15. Commit;
16. Truncate Table Inpatient;
17. /* Calculate How many days Patient added in Hospital*/
18. Select TimestampDiff(Day, '2021-06-12', '2021-06-30');
```

The Result Grid shows the data from the Inpatient table:

Patient_id	name	gender	address	date_of_admit	date_of_discharge	disease	advance	lab_no	Doctor_id
2222	Pratik B.	Male	At:Alkoti	2021-05-08	2021-05-18	Cold	1000	2	48
3333	Anu B.	Female	At:Belhe	2021-05-09	2021-05-20	Flue	10000	3	46
4444	Sonu P.	Female	At:Naval	2021-05-10	2021-05-22	Flue	10000	4	46
5555	Sahil G.	Male	At:Darodi	2021-05-20	2021-05-26	Cough	1000	5	45
6666	Sumit K.	Male	At:Loni	2021-05-21	2021-05-30	Body Pain	1000	6	47
7777	Anil B.	Male	At:Alle	2021-05-22	2021-06-20	Covid-19	20000	7	44
8888	Sanket K.	Male	At:Pabal	2021-05-30	2021-06-20	Covid-19	20000	8	44
9999	Amar.	Male	At:Randhe	2021-06-12	2021-06-30	Covid-19	20000	9	44

14. Count how many patients in outpatient table-

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
1. Use HMS_db;
2. Insert Into Outpatient Values(9999, '2021-06-30', 9);
3. Insert Into Outpatient Values(6666, '2021-05-30', 6);
4. Insert Into Outpatient Values(4444, '2021-05-22', 4);
5. Select * from Outpatient;
6.
7. /* Count No. of Outpatient */
8. Select Count(Patient_id) as 'No. of Outpatient' from Outpatient;
```

The Result Grid shows the data from the Outpatient table:

Patient_id	date_of_admit	advance
9999	2021-06-30	9
6666	2021-05-30	6
4444	2021-05-22	4

The Output window shows the execution of the queries:

```
79 14:28:39 Select * from Inpatient Where date_of_admit Between '2021-05-08' and '2021-05-30' LIMIT 0, 1000 7 row(s) returned 0.000 sec / 0.000 sec
80 14:31:36 Select Count(Patient_id) as 'No. of Outpatient' from Outpatient LIMIT 0, 1000 1 row(s) returned 0.031 sec / 0.000 sec
```

15. Display details(disease and doctor_id also) of patient in Outpatient Table(Using Inner join)-

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1. Use HMS_db;
2. Insert Into Outpatient Values(9999,'2021-06-30',9);
3. Insert Into Outpatient Values(6666,'2021-05-30',6);
4. Insert Into Outpatient Values(4444,'2021-05-22',4);
5. Select * from Outpatient;
6.
7. /* Count No. of Outpatient */
8. Select Count(Patient_id) as 'No. of Outpatient' from Outpatient;
9.
10. /*To Identify OutPatient disease */
11. Select o.Patient_id,o.date,l.lab_no,l.disease,l.Doctor_id from Outpatient o
12. INNER JOIN Lab l
13. ON l.lab_no=o.lab_no;
14.
15. Truncate Table Outpatient;
```

The result grid shows the following data:

Patient_id	date	lab_no	disease	Doctor_id
4444	2021-05-22	4	Flue	46
6666	2021-05-30	6	Body Pain	47
9999	2021-06-30	9	Covid-19	44

The output pane shows the execution of the query, with messages indicating that 3 rows were returned for the inner join query.

16. Display details of Covid-19 patient in Inpatient table (using view)-

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1. Use HMS_db;
2.
3. /*Covid-19 Patient View*/
4.
5. Create View Covid_19_Patient
6. As
7. Select Patient_id,name,gender,date_of_admit,lab_no from Inpatient
8. where disease="Covid-19";
9. Select * from Covid_19_Patient;
10.
11. Drop View Covid_19_Patient;
```

The result grid shows the following data:

Patient_id	name	gender	date_of_admit	lab_no
7777	Anil B.	Male	2021-05-22	7
8888	Sanket K.	Male	2021-05-30	8
9999	Amar.	Male	2021-06-12	9

The output pane shows the execution of the query, with messages indicating that 0 rows were affected by the view creation and 3 rows were returned by the view query.

17. Display bill slip of any one patient (Bill table)-

Live SQL

Feedback Help sangamgordes545@gmail.com

SQL Worksheet

Clear Find Actions Save Run

```
--
14 Declare
15 doc_charge Bill.doctor_charge%type;
16 nurse_Charges Bill.nursing_charge%type;
17 medicine_charges Bill.medicine_charge%type;
18 lab_charges Bill.lab_charge%type;
19 advance_RS Bill.lab_charge%type;
20 P_id Bill.Patient_id%type;
21 Bill_no Bill.bill_no%type;
22 Total_Number(10);
23 Total_Bill Number(10);
24
25 Begin
26 Select doctor_charge,nursing_charge,medicine_charge,lab_charge,advance,Patient_id,bill_no
27 Into doc_charge,nurse_Charges, medicine_charges,lab_charges,advance_RS,P_id,Bill_no
28 From Bill
29 Where Patient_Id=3333;
30 Total:=(doc_charge+nurse_Charges+medicine_charges+lab_charges);
31 Total_Bill:=Total_advance_RS;
32 Dms_Output.Put_Line('====="Tech Health" Hospital=====');
33 Dms_Output.Put_Line('Bill_no : '||Bill_no);
34 Dms_Output.Put_Line('Patient Id : '||P_id);
35 Dms_Output.Put_Line('-----|');
36 Dms_Output.Put_Line(' Essential charges Amount');
37 Dms_Output.Put_Line('-----|');
38 Dms_Output.Put_Line(' doctor_charge '||doc_charge);
39 Dms_Output.Put_Line(' nursing_charge '||nurse_Charges);
40 Dms_Output.Put_Line(' medicine_charge '||medicine_charges);
41 Dms_Output.Put_Line(' lab_charge '||lab_charges);
42 Dms_Output.Put_Line(' Total Amount: '||Total);
43
44 Dms_Output.Put_Line(' Total Amount: '||Total);
45 Dms_Output.Put_Line('-----|');
46 Dms_Output.Put_Line(' Your Advance : '||advance_RS);
47 Dms_Output.Put_Line('-----|');
48 Dms_Output.Put_Line('Final Total Bill in (Rs.) : '|| Total_Bill||'/-');
49 End;
```

Statement processed.
====="Tech Health" Hospital=====

Bill_no : 333

Patient Id : 3333

-----|

Essential charges Amount

-----|

doctor_charge 3500

nursing_charge 4200

medicine_charge 10000

lab_charge 10000

Total Amount: 33700

-----|

Your Advance : 10000

-----|

Final Total Bill in (Rs.) : 23700/-

18. Display Info of any one employee in Staff table (using User define Exception)-

Live SQL

Feedback Help sangamgordes545@gmail.com

SQL Worksheet

Clear Find Actions Save Run

```
10 Declare
11 S_Name Staff.s_name%type;
12 S_Id Staff.s_id %type;
13 S_salary Staff.salary%type;
14 E_Staff_id Number(4)--111;
15 Invalid_Sid Exception;
16
17 Begin
18 If E_Staff_id > 110
19 then
20 If E_Staff_id > 117 then
21 Raise Invalid_Sid;
22 Else
23 Select s_name,s_id,salary
24 Into S_Name, S_Id, S_salary
25 From Staff
26 where s_id= E_Staff_id;
27 dms_output.put_line('***Staff Employee Info***');
28 dms_output.put_line('Employee Id : '||S_Id);
29 dms_output.put_line('Employee Name : '||S_Name);
30 dms_output.put_line('Employee Salary: '||S_salary);
31 dms_output.put_line('-----|');
32 End If;
33 Else
34 Raise Invalid_Sid;
35 End If;
36 Exception
37 When Invalid_Sid Then
38 dms_output.put_line('Enter valid or correct Staff Id of Employee!!!!');
39 End;
```

Statement processed.
Staff Employee Info

-----|

Employee Id : 111

Employee Name : Harish S.

Employee Salary: 10000

-----|

Statement processed.
Enter valid or correct Staff Id of Employee!!!!

If you enter Invalid id then will be

19. Increment and Display Salary in Staff table of any one Employee (Using implicit_cursor)-

Live SQL

SQL Worksheet

```
11 Declare
12     VNumber number(10);
13 Begin
14     Update Staff
15     Set salary = ( salary + 1000 )
16     where s_id = 112;
17     VNumber:= SQL%ROWCOUNT;
18     If Sql%FOUND Then
19         DBMS_OUTPUT.PUT_LINE('Salary of '||VNumber||' Of Employee Updated successfully!!!');
20     Else
21         DBMS_OUTPUT.PUT_LINE('Something Wrong !!!');
22     End IF;
23 End;
24 /
25 Select * from Staff;
```

Statement processed.
Salary of 1 Of Employee Updated successfully!!!

S_NAME	S_ID	SALARY	A_ID
Harish S.	111	10000	100
Nitin P.	112	14000	100
Avi P.	113	15000	100
Alka P.	114	18000	100
Ashu L.	115	9000	100
Shubh K.	116	20000	100
Dips G.	117	30000	100

20. Display Lab-Patient on high risk(using Explicit Cursor)-

Live SQL

SQL Worksheet

```
14 Declare
15     LabNo Lab.Lab_no%Type;
16     P_id Lab.Patient_id%Type;
17     P_age Lab.Age%Type;
18     P_weight Lab.Weight%Type;
19     P_Disease Lab.disease%Type;
20     Cursor PatientCursor
21     IS
22     Select Lab_no,Patient_id,Age,Weight,disease From Lab
23     where Age>70;
24 Begin
25     If Not PatientCursor%ISOPEN then
26         OPEN PatientCursor;
27     End if;
28     Dbms_Output.Put_Line('>-----Patient on High Risk-----<');
29     Dbms_Output.Put_Line(' ');
30     Dbms_Output.Put_Line('-----|-----|-----|-----|');
31     Dbms_Output.Put_Line(' Lab_no Patient_id Age Weight disease ');
32     Dbms_Output.Put_Line('-----|-----|-----|-----|');
33     LOOP
34         Fetch PatientCursor into LabNo, P_id,P_age,P_weight, P_Disease;
35         Exit when PatientCursor%NOTFOUND;
36         Dbms_Output.Put_Line(' || LabNo|| ' || P_id || ' || P_age || ' || P_weight || ' || P_Disease ');
37     End loop;
38     Dbms_Output.Put_Line('-----|-----|-----|-----|');
39     Dbms_Output.Put_Line('>-----<');
40     Dbms_Output.Put_Line(' ||PatientCursor%ROWCOUNT|| Rows selected');
41     Dbms_Output.Put_Line('<');
42     CLOSE PatientCursor;
43 End;
```

Statement processed.

```
>-----Patient on High Risk-----<
|-----|-----|-----|-----|
Lab_no Patient_id Age Weight disease
|-----|-----|-----|-----|
3 3333 88 56 Flue
6 6666 88 56 Body Pain
9 9999 88 77 Covid-19
|-----|-----|-----|-----|
>-----<
3 Rows selected
>-----<
```

21. Add and Display Dead patient in outpatient Table (using Store Procedure)-



The screenshot shows a 'Live SQL' interface with a 'SQL Worksheet' tab. The SQL script in the editor is as follows:

```
1 Create table Outpatient(Patient_id int Primary Key,Dead_date varchar(15) Not Null,lab_no int);
2 Insert Into Outpatient Values(9999,'2021-06-30',9);
3 Insert Into Outpatient Values(6666,'2021-05-30',6);
4 Insert Into Outpatient Values(4444,'2021-05-22',4);
5 Declare
6 Procedure INSERT_Outpatient(Pid in Number,Add_date in varchar,labNo in number)
7 As
8 Begin
9     Insert into Outpatient(Patient_id ,Dead_date ,lab_no)
10    Values(Pid ,Add_date ,labNo );
11 End;
12 Begin
13 INSERT_Outpatient(7777,'2021-06-20',7);
14 End;
15 /
16 select * from Outpatient;
```

Below the script, the message 'Statement processed.' is displayed. The resulting table is shown below:

PATIENT_ID	DEAD_DATE	LAB_NO
7777	2021-06-20	7
9999	2021-06-30	9
6666	2021-05-30	6
4444	2021-05-22	4

6.0 Resources Required: -

Sr. No.	Name of Resource	Specifications	Qty	Remarks
1	Software	MYSQL, Oracle Sql Live	1	-
2	Books	POD, DBMS	1	-