American International University-Bangladesh

Department of Computer Science

Introduction To Database-2108

Section: F, Group-03

Project Title: INDOOR HOSPITAL MANAGEMENT SYSTEM

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INTRODUCTION

In the rapidly advancing field of healthcare, adept information management stands as a cornerstone for delivering exceptional patient care and streamlining the intricate operations of a hospital. The Indoor Hospital Management System is a comprehensive solution designed to address the intricate needs of healthcare institutions by providing a structured and efficient database management system. The primary objective of this database project is to create a robust and secure platform that seamlessly integrates various components of hospital management, ranging from patient information to appointment scheduling, medical records, and financial transactions. This project aims to enhance the efficiency, accuracy, and accessibility of data within the hospital ecosystem, ultimately contributing to improved healthcare services.

GANTT CHART

		November				December		
Task	Description	Week-1	Week-2	Week-3	Week-4	Week-5	Week-6	Week-7
1	Idea Generate							
2	Case Study							
3	E-R Diagram							
4	Project Proposal							
5	Normalization, Finalization, Optimization							
6	Table Creation							
7	Data Insert							
8	Query Testing							
9	Connection							
10	Presentation, Final Submission							

CASE STUDY

In an indoor hospital management system every patient has a unique ID named **P_id**. Each patient has a name which is indicated by **P_name**. The system also stores patient **gender**, Date of Birth as **DOB**, **address**, **phone**. A patient has multiple phone number. A patient scheduled appointment to visit the doctor. Each appointment is identified by appointed number named **A_no**. While scheduling, the **appointment date** and **appointment time** is stored. The system can track doctor's information. Each doctor has a unique ID named **D_id**, name which is indicated by **D_name**, **specialist**, **phone** and **salary**. A doctor has multiple phone number. Nurses are also collaborate with doctor. To identify a nurse the system also stores nurse id named **N_id**, name as **N_name**, **phone**, **salary** and **duty hour**. A nurse may work multiple time. A patient undergoes admission. Each admission has a name as **A_name**, **admission date**, **release date** and the unique property of each admission is admission id named **A_id**. Admission include ward. To identify a ward the system also stores ward ID as **W_id**, **W_name**, **capacity** and **location**. Bill id named **B_id**, **amount**, **date** also track by the system. Bill is paid by the patient.

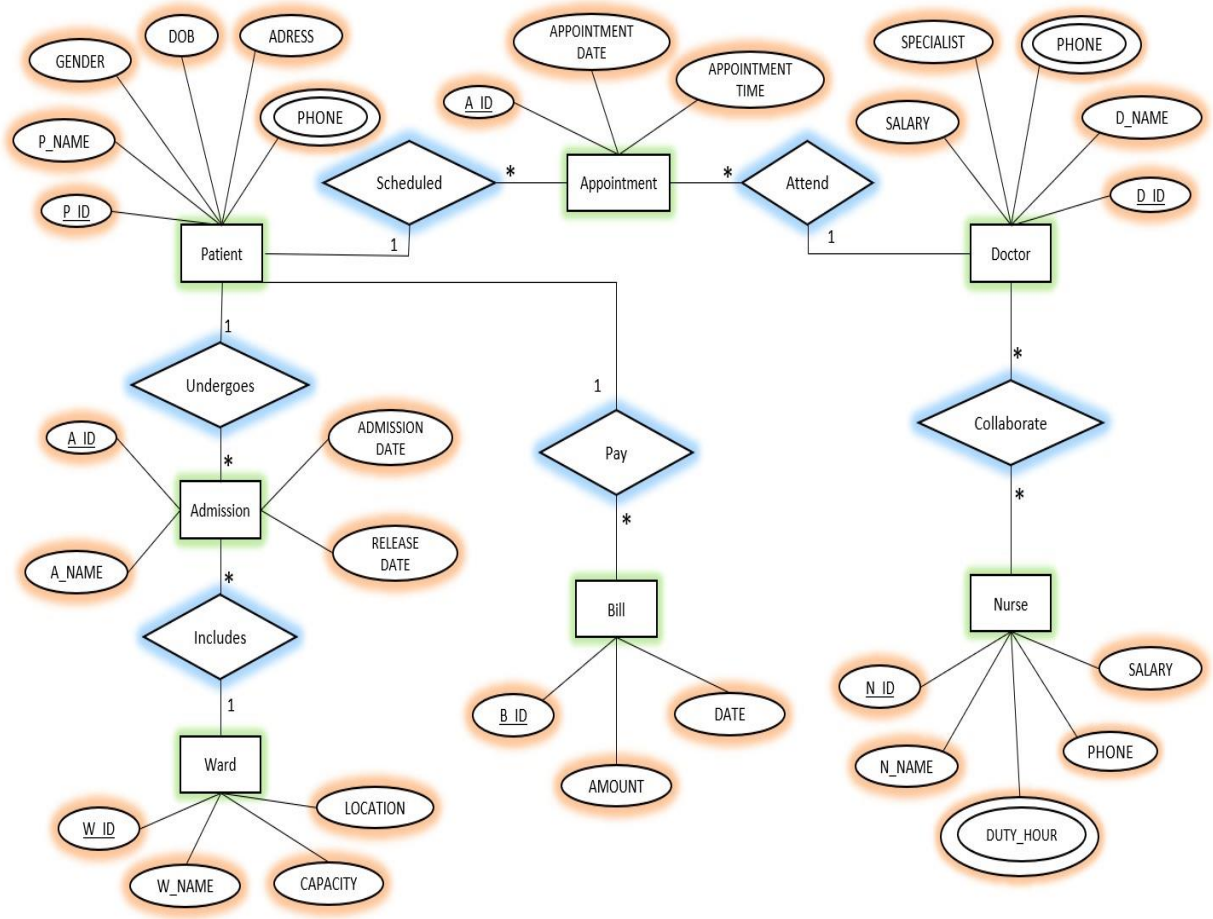


Fig-01: E-R Diagram For Indoor Hospital Management System

NORMALIZATION

- Patient scheduled appointment

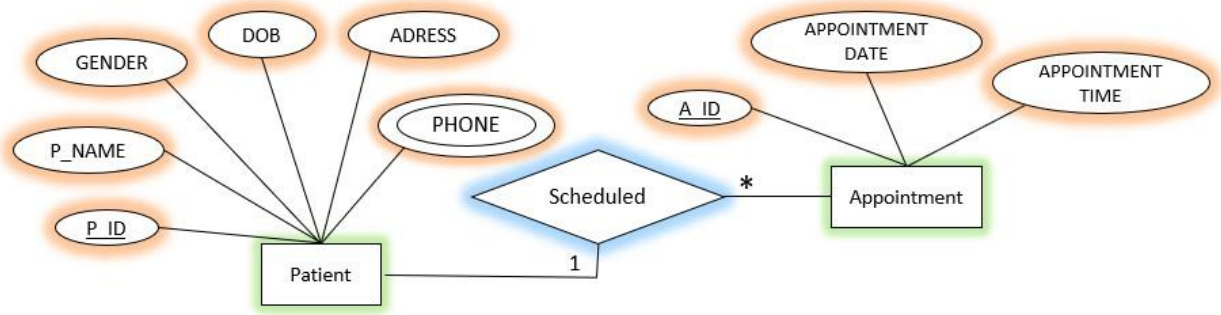


Fig-02: Relationship Between Patient and Appointment

UNF: P_id, P_name, Gender, DOB, Address, Phone, A_no, Appointment_date, Appointment_time

1NF: **Multivalued attribute:** Phone

P_id, P_name, Gender, DOB, Address, A_no, Appointment_date, Appointment_time

2NF: **1.** P_id, Phone

2. P_id, P_name, Gender, DOB, Address

3. A_no, Appointment_date, Appointment_time, P_id

3NF: **1.** P_id, phone

2. P_id, P_name, gender, DOB, address

3. A_no, Appointment_date, Appointment_time, P_id

- Doctor attends appointment

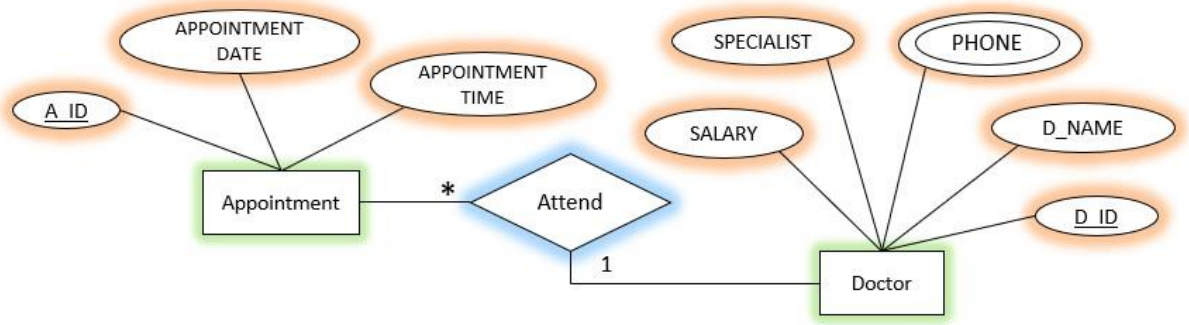


Fig-03: Relationship Between Appointment and Doctor

UNF: D_id, D_name, Specialist, Phone, Salary**,** A_no, Appointment_date, Appointment_time

1NF: **Multivalued attribute:** Phone

D_id, D_name, Specialist, Salary**,** A_no, Appointment_date, Appointment_time

2NF: **1.** D_id, Phone

2. D_id, D_name, Specialist, Salary

3. A_no, Appointment_date, Appointment_time, D_id

3NF: **1.** D_id, Phone

2. D_id, D_name, Specialist, Salary

3. A_no, Appointment_date, Appointment_time, D_id

- Nurse collaborate with Doctor

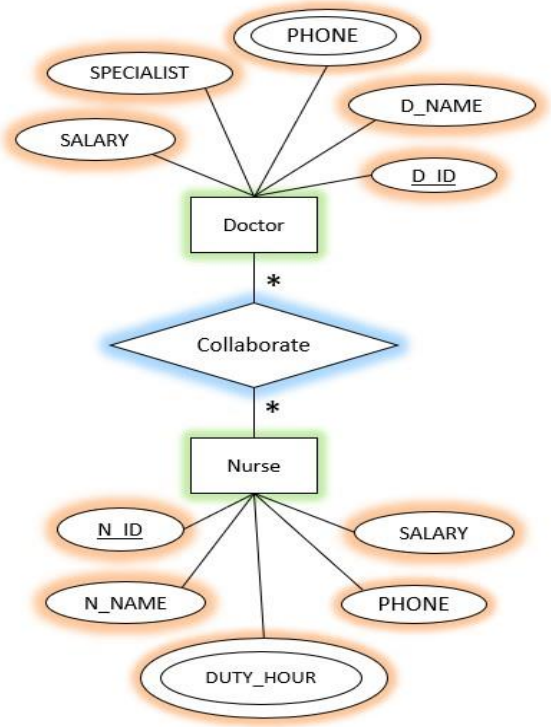


Fig-04: Relationship Between Nurse and Doctor

UNF: D_id, D_name, Specialist, Phone, Salary, N_id, N_name, Duty_hour, Phone, Salary

1NF: **Multivalued attribute:** Phone, Duty_hour

D_id, D_name, Specialist, Salary, N_id, N_name, Phone, Salary

2NF: **1.** D_id, Phone

2. N_id, Duty_hour

3. D_id, D_name, Specialist, Salary

4. N_id, N_name, Phone, Salary, D_id

3NF: **1.** D_id, Phone

2. N_id, Duty_hour

3. D_id, D_name, Specialist, Salary

4. N_id, N_name, Phone, Salary, D_id

- Patient undergoes admission

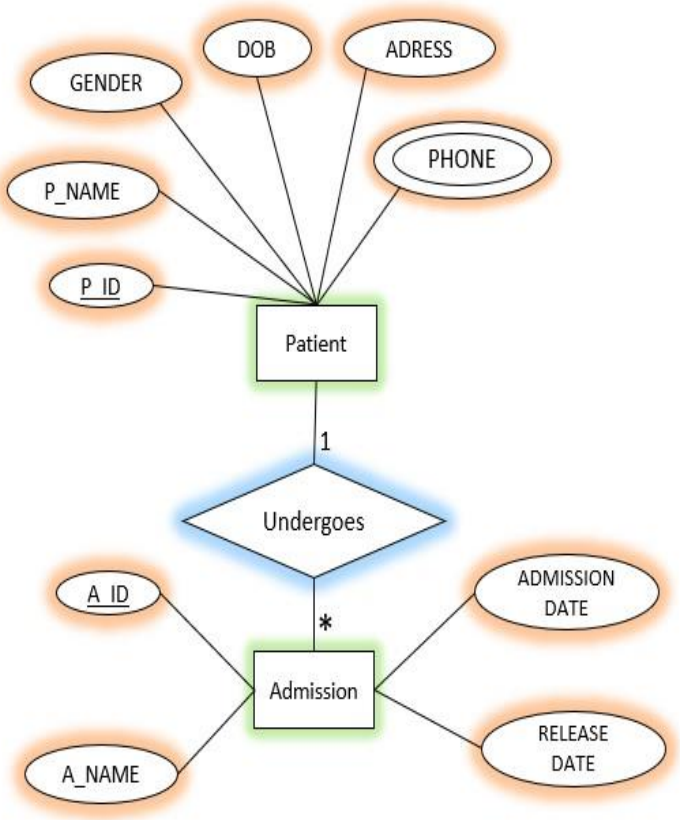


Fig-05: Relationship Between Patient and Admission

UNF: P_id, P_name, Gender, DOB, Address, Phone, A_id, A_name, Admission_time, Release_time

1NF: **Multivalued attribute:** Phone

P_id, P_name, Gender, DOB, Address, A_id, A_name, Admission_date, Release_date

2NF: 1. P_id, phone

2. P_id, P_name, Gender, DOB, Address

3. A_id, A_name, admission_date, release_date, P_id

3NF: 1. P_id, phone

2. P_id, P_name, Gender, DOB, Address

3. A_id, A_name, Admission_date, Release_date, P_id

- **Admission include ward**

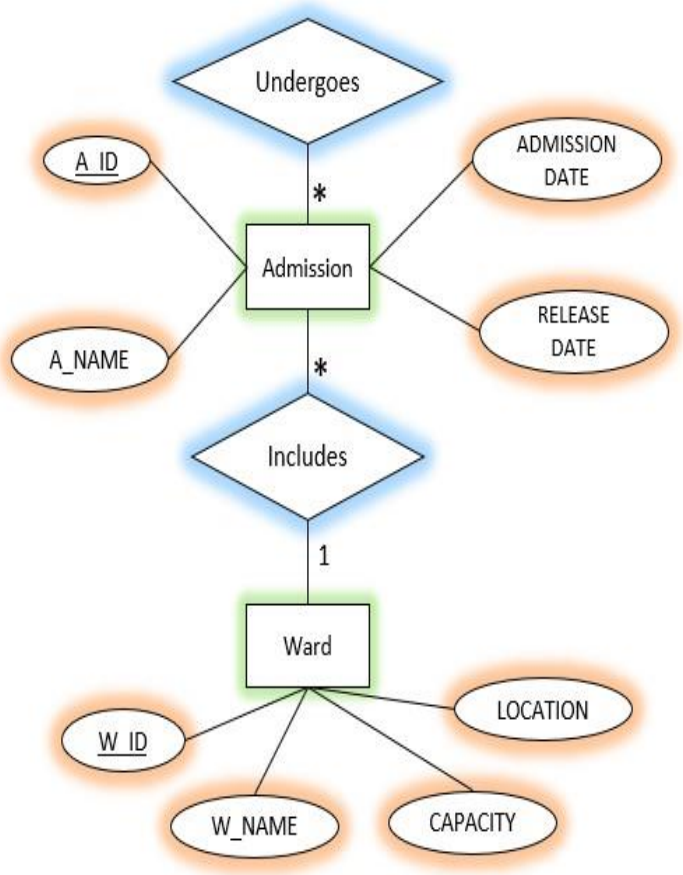


Fig-06: Relationship Between Patient and Admission

UNF: A_id, A_name, Admission_date, Release_date, W_id, W_name, Capacity, Location

1NF: W_id, W_name, Capacity, Location, A_id

2NF: W_id, W_name, Capacity, Location, A_id

3NF: W_id, W_name, Capacity, Location, A_id

- Patient pays Bill

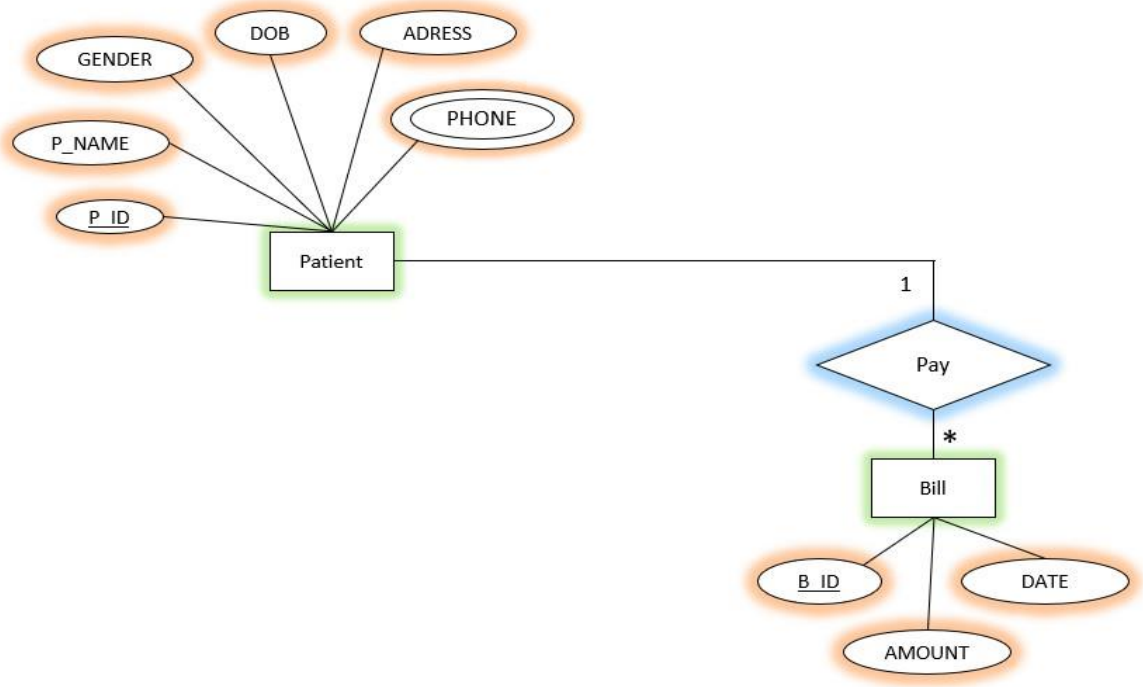


Fig-07: Relationship Between Patient and Bill

UNF: P_id, P_name, Gender, DOB, Address, Phone, B_id, Amount, Date

1NF: Multivalued attribute: Phone

P_id, P_name, Gender, DOB, Address, B_id, Amount, Date

2NF: 1. P_id, Phone

2. P_id, P_name, Gender, DOB, Address

3. B_id, Amount, Date, P_id

3NF: 1. P_id, Phone

2. P_id, P_name, Gender, DOB, Address

3. B_id, Amount, Date, P_id

Finalization

1. P_id, phone
2. P_id, P_name, gender, DOB, address
3. A_no, Appointment_date, Appointment_time, P_id
4. D_id, Phone
5. D_id, D_name, Specialist, Salary
6. A_no, Appointment_date, Appointment_time, D_id
7. ~~D_id, Phone~~
8. N_id, Duty_hour
9. ~~D_id, D_name, Specialist, Salary~~
10. N_id, N_name, Phone, Salary, D_id
11. ~~D_id, Phone~~
12. ~~D_id, D_name, Specialist, Salary~~
13. ~~P_id, phone~~
14. ~~P_id, P_name, Gender, DOB, Address~~
15. A_id, A_name, Admission_date, Release_date, P_id
16. W_id, W_name, Capacity, Location, A_id
17. ~~P_id, Phone~~
18. ~~P_id, P_name, Gender, DOB, Address~~
19. B_id, Amount, Date, P_id

Table Creation

1. Patient Info

Autocommit Display 15

```
CREATE TABLE PATIENT (
    P_ID INT PRIMARY KEY,
    P_NAME CHAR(30) NOT NULL,
    GENDER VARCHAR(10),
    DOB DATE,
    ADDRESS VARCHAR(50),
    PHONE VARCHAR(20)
);


DESC PATIENT
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **PATIENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PATIENT	P_ID	Number	-	-	0	1	-	-	-
	P_NAME	Char	30	-	-	-	-	-	-
	GENDER	Varchar2	10	-	-	-	✓	-	-
	DOB	Date	7	-	-	-	✓	-	-
	ADDRESS	Varchar2	50	-	-	-	✓	-	-
	PHONE	Varchar2	20	-	-	-	✓	-	-

1 - 6

2. Patient Contact

Autocommit Display 15

```
CREATE TABLE PATIENTPHONES (
    PHONE VARCHAR(20),
    P_ID INT,
    FOREIGN KEY (P_ID) REFERENCES PATIENT(P_ID)
);


DESC PATIENTPHONES
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **PATIENTPHONES**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PATIENTPHONES	PHONE	Varchar2	20	-	-	-	✓	-	-
	P_ID	Number	-	-	0	-	✓	-	-

1 - 2

3. Doctor Info

Autocommit Display 15

```
CREATE TABLE DOCTOR (
    D_ID INT PRIMARY KEY,
    D_NAME CHAR(30) NOT NULL,
    SPECIALIST VARCHAR(20),
    SALARY DECIMAL(10, 2),
    PHONE VARCHAR(20)
);


DESC DOCTOR
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **DOCTOR**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DOCTOR	D_ID	Number	-	-	0	1	-	-	-
	D_NAME	Char	30	-	-	-	-	-	-
	SPECIALIST	Varchar2	20	-	-	-	✓	-	-
	SALARY	Number	-	10	2	-	✓	-	-
	PHONE	Varchar2	20	-	-	-	✓	-	-

1 - 5

4. Doctor Contact

Autocommit Display 15

```
CREATE TABLE DOCTORPHONES (
    PHONE VARCHAR(20),
    D_ID INT,
    FOREIGN KEY (D_ID) REFERENCES DOCTOR(D_ID)
);


DESC DOCTORPHONES
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **DOCTORPHONES**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
DOCTORPHONES	PHONE	Varchar2	20	-	-	-	✓	-	-
	D_ID	Number	-	-	0	-	✓	-	-

1 - 2

5. Appointment Info

Autocommit Display 15

```
CREATE TABLE APPOINTMENT (
    A_NO INT PRIMARY KEY,
    APPOINTMENT_DATE DATE,
    APPOINTMENT_TIME CHAR(20),
    P_ID INT,
    D_ID INT,
    FOREIGN KEY (P_ID) REFERENCES PATIENT(P_ID),
    FOREIGN KEY (D_ID) REFERENCES DOCTOR(D_ID)
);


DESC APPOINTMENT
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **APPOINTMENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
APPOINTMENT	A_NO	Number	-	-	0	1	-	-	-
	APPOINTMENT_DATE	Date	7	-	-	-	✓	-	-
	APPOINTMENT_TIME	Char	20	-	-	-	✓	-	-
	P_ID	Number	-	-	0	-	✓	-	-
	D_ID	Number	-	-	0	-	✓	-	-

1 - 5

6. Nurse Info

Autocommit Display 15

```
CREATE TABLE NURSE (
    N_ID INT PRIMARY KEY,
    N_NAME CHAR(30) NOT NULL,
    SALARY DECIMAL(10, 2),
    DUTY_HOURS VARCHAR(20),
    PHONE VARCHAR(20),
    D_ID INT,
    FOREIGN KEY (D_ID) REFERENCES DOCTOR(D_ID)
);


DESC NURSE
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **NURSE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
NURSE	N_ID	Number	-	-	0	1	-	-	-
	N_NAME	Char	30	-	-	-	-	-	-
	SALARY	Number	-	10	2	-	✓	-	-
	DUTY_HOURS	Varchar2	20	-	-	-	✓	-	-
	PHONE	Varchar2	20	-	-	-	✓	-	-
	D_ID	Number	-	-	0	-	✓	-	-

1 - 6

7. Nurse Schedule

Autocommit Display 15

```
CREATE TABLE NURSEWORKSCHEDULE (
    DUTY_HOURS VARCHAR(20),
    N_ID INT,
    FOREIGN KEY (N_ID) REFERENCES NURSE(N_ID)
);


DESC NURSEWORKSCHEDULE
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **NURSEWORKSCHEDULE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
NURSEWORKSCHEDULE	DUTY_HOURS	Varchar2	20	-	-	-	✓	-	-
	N_ID	Number	-	-	0	-	✓	-	-

1 - 2

8. Admission Info

Autocommit Display 15

```
CREATE TABLE ADMISSION (
    A_ID INT PRIMARY KEY,
    A_NAME CHAR(30) NOT NULL,
    ADMISSIONDATE DATE,
    RELEASEDATE DATE,
    P_ID INT,
    FOREIGN KEY (P_ID) REFERENCES PATIENT(P_ID)
);


DESC ADMISSION
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **ADMISSION**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ADMISSION	A_ID	Number	-	-	0	1	-	-	-
	A_NAME	Char	30	-	-	-	-	-	-
	ADMISSIONDATE	Date	7	-	-	-	✓	-	-
	RELEASEDATE	Date	7	-	-	-	✓	-	-
	P_ID	Number	-	-	0	-	✓	-	-

1 - 5

9. Ward Info

Autocommit Display 15

```
CREATE TABLE WARD (
    W_ID INT PRIMARY KEY,
    W_NAME CHAR(30) NOT NULL,
    CAPACITY INT,
    LOCATION VARCHAR(40),
    A_ID INT,
    FOREIGN KEY (A_ID) REFERENCES ADMISSION(A_ID)
);

DESC WARD
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **WARD**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
WARD	W_ID	Number	-	-	0	1	-	-	-
	W_NAME	Char	30	-	-	-	-	-	-
	CAPACITY	Number	-	-	0	-	✓	-	-
	LOCATION	Varchar2	40	-	-	-	✓	-	-
	A_ID	Number	-	-	0	-	✓	-	-

1 - 5

10. Bill Info

Autocommit Display 15

```
CREATE TABLE BILL (
    B_ID INT PRIMARY KEY,
    AMOUNT DECIMAL(10, 2),
    BILLDATE DATE,
    P_ID INT,
    FOREIGN KEY (P_ID) REFERENCES PATIENT(P_ID)
);

DESC BILL
```

Results Explain Describe Saved SQL History

Object Type **TABLE** Object **BILL**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BILL	B_ID	Number	-	-	0	1	-	-	-
	AMOUNT	Number	-	10	2	-	✓	-	-
	BILLDATE	Date	7	-	-	-	✓	-	-
	P_ID	Number	-	-	0	-	✓	-	-

1 - 4

Data Insertion

1. Patient Info

Autocommit Display 10

```
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (101, 'SADIA ALOM', 'FEMALE', '18-MAY-1992', 'DHAKA', '01611223344')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (101, 'SADIA ALOM', 'FEMALE', '18-MAY-1992', 'DHAKA', '01611223344')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (102, 'RAKIB KHAN', 'MALE', '25-AUG-1985', 'CHITTAGONG', '01899887766')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (103, 'ARIA REHMAN', 'FEMALE', '05-DEC-1998', 'SYLHET', '01776543210')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (104, 'TAKBIR ZAMAN', 'MALE', '30-JUN-1980', 'KHULNA', '01555443322')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (105, 'RENESA TAHSIN ', 'FEMALE', '12-FEB-1995', 'RAJSHAHI', '01987654321')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (106, 'TAWFIQ AHMED ', 'MALE', '23-FEB-1996', 'RAJSHAHI', '01587654331')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (107, 'TAHMID NIROB ', 'MALE', '10-MAR-2005', 'DINAJPUR', '01887654321')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (108, 'TAMIM AHMED ', 'MALE', '12-MAR-2000', 'DHAKA', '01984454321')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (109, 'SAKIB MAHMUD', 'MALE', '25-NOV-2010', 'CHANDPUR', '01846887766')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (110, 'MOHIMA REHMAN', 'FEMALE', '24-DEC-1990', 'CHITTAGONG', '01799887766')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (111, 'ABIR ZAMAN ', 'MALE', '16-SEP-2000', 'KHULNA', '01665443322')
INSERT INTO PATIENT (P_ID, P_NAME, GENDER, DOB, ADDRESS, PHONE) VALUES (112, 'ZEBA TAHSIN ', 'FEMALE', '12-JAN-2005', 'RAJSHAHI', '01537654321')
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 15

```
SELECT *
FROM PATIENT
```

Results Explain Describe Saved SQL History

P_ID	P_NAME	GENDER	DOB	ADDRESS	PHONE
101	SADIA ALOM	FEMALE	18-MAY-92	DHAKA	01611223344
102	RAKIB KHAN	MALE	25-AUG-85	CHITTAGONG	01899887766
103	ARIA REHMAN	FEMALE	05-DEC-98	SYLHET	01776543210
104	TAKBIR ZAMAN	MALE	30-JUN-80	KHULNA	01555443322
105	RENESA TAHSIN	FEMALE	12-FEB-95	RAJSHAHI	01987654321
106	TAWFIQ AHMED	MALE	23-FEB-96	RAJSHAHI	01587654331
107	TAHMID NIROB	MALE	10-MAR-05	DINAJPUR	01887654321
108	TAMIM AHMED	MALE	12-MAR-00	DHAKA	01984454321
109	SAKIB MAHMUD	MALE	25-NOV-10	CHANDPUR	01846887766
110	MOHIMA REHMAN	FEMALE	24-DEC-90	CHITTAGONG	01799887766
111	ABIR ZAMAN	MALE	16-SEP-00	KHULNA	01665443322
112	ZEBA TAHSIN	FEMALE	12-JAN-05	RAJSHAHI	01537654321

12 rows returned in 0.00 seconds CSV Export

2. Patient Contact

Autocommit Display 10

```
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01611223344', 101)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01439454399', 101)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01899887766', 102)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01799867666', 102)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01776543210', 103)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01555443322', 104)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01987654321', 105)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01887654361', 105)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01587654331', 106)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01887654321', 107)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01984454321', 108)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01846887766', 109)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01799887766', 110)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01665443322', 111)
INSERT INTO PATIENTPHONES (PHONE, P_ID) VALUES ('01537654321', 112)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 15

```
SELECT *
FROM PATIENTPHONES
```

Results Explain Describe Saved SQL History

PHONE	P_ID
01899887766	102
01799867666	102
01776543210	103
01555443322	104
01987654321	105
01887654361	105
01587654331	106
01887654321	107
01984454321	108
01846887766	109
01799887766	110
01665443322	111
01537654321	112
01611223344	101
01439454399	101

15 rows returned in 0.00 seconds CSV Export

3. Doctor Info

Autocommit Display 10

```
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (1, 'DR. REZWAN KHAN', 'CARDIOLOGIST', 120000.00, '01987654321')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (2, 'DR. FARIDA AKHTAR', 'ORTHOPEDIC SURGEON', 150000.00, '01765432109')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (3, 'DR. RIJVIA KABIR', 'NURTRITIONIST', 110000.00, '01876543210')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (4, 'DR. TARIN ', 'NEUROLOGIST', 130000.00, '01554332211')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (5, 'DR. NUSRAT JAHAN', 'DERMATOLOGIST', 140000.00, '01678787878')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (6, 'DR. MAHI RAHMAN', 'MEDICINE', 115000.00, '01876543216')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (7, 'DR. TANVIR ZAMAN', 'DENTIST', 110000.00, '01876543217')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (8, 'DR. SOWKAT ALAM', 'NEOROSURGEN', 150000.00, '01876543218')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (9, 'DR. SHOURADIP NANDI', 'EYE SPECIALIST', 100000.00, '01876543219')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (10, 'DR. NOWROSE KHAN', 'CARDIOLOGIST', 90000.00, '01876543220')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (11, 'DR. ANONNA RAHMAN', ' GYNECOLOGIST ', 90000.00, '01876543221')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (12, 'DR. JANNATUL FERDOUS', ' EYE SPECIALIST', 90000.00, '01876543222')
INSERT INTO DOCTOR (D_ID, D_NAME, SPECIALIST, SALARY, PHONE) VALUES (13, 'SATHI AKTER', ' GYNOCOLOGEST ', 90000.00, '01876543223')
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 20

```
SELECT *
FROM DOCTOR
```

Results Explain Describe Saved SQL History

D_ID	D_NAME	SPECIALIST	SALARY	PHONE
1	DR. REZWAN KHAN	CARDIOLOGIST	120000	01987654321
2	DR. FARIDA AKHTAR	ORTHOPEDIC SURGEON	150000	01765432109
3	DR. RIJVIA KABIR	NURTRITIONIST	110000	01876543210
4	DR. TARIN	NEUROLOGIST	130000	01554332211
5	DR. NUSRAT JAHAN	DERMATOLOGIST	140000	01678787878
6	DR. MAHI RAHMAN	MEDICINE	115000	01876543216
7	DR. TANVIR ZAMAN	DENTIST	110000	01876543217
8	DR. SOWKAT ALAM	NEOROSURGEN	150000	01876543218
9	DR. SHOURADIP NANDI	EYE SPECIALIST	100000	01876543219
10	DR. NOWROSE KHAN	CARDIOLOGIST	90000	01876543220
11	DR. ANONNA RAHMAN	GYNECOLOGIST	90000	01876543221
12	DR. JANNATUL FERDOUS	EYE SPECIALIST	90000	01876543222
13	SATHI AKTER	GYNOCOLOGEST	90000	01876543223

13 rows returned in 0.00 seconds CSV Export

4. Doctor Contact

Autocommit Display 10

```
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01987654321', 1)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01765432109', 2)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543210', 3)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01888543256', 3)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01554332211', 4)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01678787878', 5)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543216',6)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01996543218',6)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543217',7)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543218',8)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543219',9)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543220',10)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543221',11)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543222',12)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01777543222',12)
INSERT INTO DOCTORPHONES (PHONE, D_ID) VALUES ('01876543223',13)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

```
SELECT *
FROM DOCTORPHONES
```

Results Explain Describe Saved SQL History

PHONE	D_ID
01987654321	1
01765432109	2
01876543210	3
01888543256	3
01554332211	4
01678787878	5
01876543216	6
01996543218	6
01876543217	7
01876543218	8
01876543219	9
01876543220	10
01876543221	11
01876543222	12
01777543222	12
01876543223	13

16 rows returned in 0.00 seconds CSV Export

5. Appointment Info

Autocommit Display 10

```
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (221, '10-JAN-23', '10:00 AM', 101, 1)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (222, '12-JAN-23', '02:30 PM', 102, 2)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (223, '03-FEB-23', '03:45 PM', 103, 3)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (224, '10-FEB-23', '11:30 AM', 104, 4)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (225, '11-FEB-23', '01:15 PM', 105, 5)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (226, '18-MAR-23', '01:15 PM', 106, 6)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (227, '21-FEB-23', '02:00 PM', 107, 7)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (228, '13-APR-23', '08:00 PM', 108, 8)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (229, '23-FEB-23', '9:15 PM', 109, 9)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (230, '11-MAR-23', '07:15 PM', 110,10)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (231, '02-MAR-23', '07:15 PM', 111, 11)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (232, '01-FEB-23', '06:30 PM', 112, 12)
INSERT INTO APPOINTMENT (A_NO, APPOINTMENT_DATE, APPOINTMENT_TIME, P_ID, D_ID) VALUES (233, '01-FEB-23', '04:30 PM', 112, 13)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 20

```
SELECT *
FROM APPOINTMENT
```

Results Explain Describe Saved SQL History

A_NO	APPOINTMENT_DATE	APPOINTMENT_TIME	P_ID	D_ID
221	10-JAN-23	10:00 AM	101	1
222	12-JAN-23	02:30 PM	102	2
223	03-FEB-23	03:45 PM	103	3
224	10-FEB-23	11:30 AM	104	4
225	11-FEB-23	01:15 PM	105	5
226	18-MAR-23	01:15 PM	106	6
227	21-FEB-23	02:00 PM	107	7
228	13-APR-23	08:00 PM	108	8
229	23-FEB-23	9:15 PM	109	9
230	11-MAR-23	07:15 PM	110	10
231	02-MAR-23	07:15 PM	111	11
232	01-FEB-23	06:30 PM	112	12
233	01-FEB-23	04:30 PM	112	13

13 rows returned in 0.00 seconds CSV Export

6. Nurse Info

Autocommit Display 10

```
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (401, ' TORSHA RAHMAN', 60000.00, 'DAY SHIFT', '01654321001',1)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (402, ' MALIHA MUMU', 50000.00, 'DAY SHIFT', '01654321002',2)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (403, ' MAHIMA RAHMAN', 50000.00, 'DAY SHIFT', '01654321003',3)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (404, ' MAHIMA RAHMAN', 50000.00, 'DAY SHIFT', '01664321003',4)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (405, 'FARIHA ZAMAN', 40000.00, 'NIGHT SHIFT', '01654321005 ',5)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (406, 'TAJINA HOSSAIN', 50000.00, 'NIGHT SHIFT', '01654321006 ',6)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (407, 'BITHI GOSH', 40000.00, 'NIGHT SHIFT', '01654321007',7)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (408, 'PRIYA DAS', 40000.00, 'NIGHT SHIFT', '01654321008 ',8)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (409, 'NOWRIN PRIMA', 35000.00, 'EVENING SHIFT', '01654321009 ', 9)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (410, 'ARPITA CHAKRABORTY', 35000.00,'EVENING SHIFT','01654321010',10)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (411, 'ARPA RAHMAN', 45000.00, 'EVENING SHIFT','01654321011',11)
INSERT INTO NURSE (N_ID, N_NAME, SALARY, DUTY_HOURS, PHONE, D_ID) VALUES (412, 'NOWRIN PRIMA', 35000.00, 'EVENING SHIFT','01654321012 ',12)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 20

```
SELECT *
FROM NURSE
```

Results Explain Describe Saved SQL History

N_ID	N_NAME	SALARY	DUTY_HOURS	PHONE	D_ID
401	TORSHA RAHMAN	60000	DAY SHIFT	01654321001	1
402	MALIHA MUMU	50000	DAY SHIFT	01654321002	2
403	MAHIMA RAHMAN	50000	DAY SHIFT	01654321003	3
404	MAHIMA RAHMAN	50000	DAY SHIFT	01664321003	4
405	FARIHA ZAMAN	40000	NIGHT SHIFT	01654321005	5
406	TAJINA HOSSAIN	50000	NIGHT SHIFT	01654321006	6
407	BITHI GOSH	40000	NIGHT SHIFT	01654321007	7
408	PRIYA DAS	40000	NIGHT SHIFT	01654321008	8
409	NOWRIN PRIMA	35000	EVENING SHIFT	01654321009	9
410	ARPITA CHAKRABORTY	35000	EVENING SHIFT	01654321010	10
411	ARPA RAHMAN	45000	EVENING SHIFT	01654321011	11
412	NOWRIN PRIMA	35000	EVENING SHIFT	01654321012	12

12 rows returned in 0.00 seconds CSV Export

7. Nurse Schedule

Autocommit Display 10

```
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('DAY SHIFT', 401)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('DAY SHIFT', 402)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('DAY SHIFT', 403)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('DAY SHIFT', 404)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('NIGHT SHIFT', 405)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('NIGHT SHIFT', 406)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('NIGHT SHIFT', 407)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('NIGHT SHIFT', 408)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('EVENING SHIFT', 409)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('EVENING SHIFT', 410)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('EVENING SHIFT', 411)
INSERT INTO NURSEWORKSCHEDULE (DUTY_HOURS, N_ID) VALUES ('EVENING SHIFT', 412)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 20

```
SELECT *
FROM NURSEWORKSCHEDULE
```

Results Explain Describe Saved SQL History

DUTY_HOURS	N_ID
DAY SHIFT	401
DAY SHIFT	402
DAY SHIFT	403
DAY SHIFT	404
NIGHT SHIFT	405
NIGHT SHIFT	406
NIGHT SHIFT	407
NIGHT SHIFT	408
EVENING SHIFT	409
EVENING SHIFT	410
EVENING SHIFT	411
EVENING SHIFT	412

12 rows returned in 0.00 seconds CSV Export

8. Admission Info

Autocommit Display 10

```
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1001, 'DELIVERY', '02-JAN-23', '15-JAN-23', 101)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1002, 'CADIAC ATTACK', '03-MAR-23', '25-MAR-23', 102)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1003, 'DELIVERY', '02-FEB-23', '26-FEB-23', 103)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1004, 'NEUROLOGICAL EVALUATION', '01-MAR-23','18-MAR-23',104)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1005, 'DERMATOLOGICAL TREATMENT', '08-JAN-23','14-JAN-23',105)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1006, 'EYE TREATMENT', '02-APR-23', '06-APR-23', 106)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1007, 'NURTRITION', '02-FEB-23', '26-FEB-23', 107)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1008, 'NEUROLOGY', '02-FEB-23', '26-FEB-23', 108)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1009, 'TEETH CARE', '02-FEB-23', '26-FEB-23', 109)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1010, 'MEDICINE', '02-FEB-23', '26-FEB-23', 110)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1011, 'EYE OPERATION', '02-FEB-23', '16-MAR-23',111)
INSERT INTO ADMISSION (A_ID, A_NAME, ADMISSIONDATE, RELEASEDATE, P_ID) VALUES (1012, 'PEDIATRIC CARE', '02-APR-23', '26-APR-23',112)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 20

```
SELECT *
FROM ADMISSION
```

Results Explain Describe Saved SQL History

A_ID	A_NAME	ADMISSIONDATE	RELEASEDATE	P_ID
1001	DELIVERY	02-JAN-23	15-JAN-23	101
1002	CADIAC ATTACK	03-MAR-23	25-MAR-23	102
1003	DELIVERY	02-FEB-23	26-FEB-23	103
1004	NEUROLOGICAL EVALUATION	01-MAR-23	18-MAR-23	104
1005	DERMATOLOGICAL TREATMENT	08-JAN-23	14-JAN-23	105
1006	EYE TREATMENT	02-APR-23	06-APR-23	106
1007	NURTRITION	02-FEB-23	26-FEB-23	107
1008	NEUROLOGY	02-FEB-23	26-FEB-23	108
1009	TEETH CARE	02-FEB-23	26-FEB-23	109
1010	MEDICINE	02-FEB-23	26-FEB-23	110
1011	EYE OPERATION	02-FEB-23	16-MAR-23	111
1012	PEDIATRIC CARE	02-APR-23	26-APR-23	112

12 rows returned in 0.00 seconds CSV Export

9. Ward Info

Autocommit Display 10

```
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (510, 'CARDIAC WARD', 50, 'FIRST FLOOR', 1002)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (511, 'EYE WARD', 40, 'SECOND FLOOR', 1011)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (512, 'PEDIATRIC WARD', 25,'THIRD FLOOR',1012)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (513, 'NEURO WARD', 20, 'THIRD FLOOR', 1008)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (514, 'DERMATOLOGY WARD', 20, 'FOURTH FLOOR',1005)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (515,'GYNOCOLOGY WARD',50,'FIFITH FLOOR',1001)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (516, 'DENTAL WARD', 20, 'FOURTH FLOOR', 1009)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (517, 'FOOD & NUTRATION', 20, 'FOURTH FLOOR',1007)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (518, 'MEDICINE WARD', 30, 'FOURTH FLOOR', 1010)
INSERT INTO WARD (W_ID, W_NAME, CAPACITY, LOCATION, A_ID) VALUES (519, ' DELIVERY WARD', 20, 'SECOND FLOOR', 1003)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 20

```
SELECT *
FROM WARD
```

Results Explain Describe Saved SQL History

W_ID	W_NAME	CAPACITY	LOCATION	A_ID
510	CARDIAC WARD	50	FIRST FLOOR	1002
511	EYE WARD	40	SECOND FLOOR	1011
512	PEDIATRIC WARD	25	THIRD FLOOR	1012
513	NEURO WARD	20	THIRD FLOOR	1008
514	DERMATOLOGY WARD	20	FOURTH FLOOR	1005
515	GYNOCOLOGY WARD	50	FIFITH FLOOR	1001
516	DENTAL WARD	20	FOURTH FLOOR	1009
517	FOOD & NUTRATION	20	FOURTH FLOOR	1007
518	MEDICINE WARD	30	FOURTH FLOOR	1010
519	DELIVERY WARD	20	SECOND FLOOR	1003

10 rows returned in 0.00 seconds CSV Export

10. Bill Info

Autocommit Display 10

```
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (777, 5000.00, '15-JAN-23', 101)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (778, 3000.00, '25-MAR-23', 102)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (779, 4500.00, '26-FEB-23', 103)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (780, 6000.00, '18-MAR-23', 104)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (781, 5000.00, '14-JAN-23', 105)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (782, 3000.00, '06-APR-23', 106)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (783, 4500.00, '26-FEB-23', 107)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (784, 6000.00, '26-FEB-23', 108)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (785, 5000.00, '26-FEB-23', 109)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (786, 3000.00, '26-FEB-23', 110)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (787, 4500.00, '16-MAR-23', 111)
INSERT INTO BILL (B_ID, AMOUNT, BILLDATE, P_ID) VALUES (788, 6000.00, '26-APR-23', 112)
```

Results Explain Describe Saved SQL History

Enter SQL statement or PL/SQL command and click Run to see the results.

Autocommit Display 20

```
SELECT *
FROM BILL
```

Results Explain Describe Saved SQL History

B_ID	AMOUNT	BILLDATE	P_ID
777	5000	15-JAN-23	101
778	3000	25-MAR-23	102
779	4500	26-FEB-23	103
780	6000	18-MAR-23	104
781	5000	14-JAN-23	105
782	3000	06-APR-23	106
783	4500	26-FEB-23	107
784	6000	26-FEB-23	108
785	5000	26-FEB-23	109
786	3000	26-FEB-23	110
787	4500	16-MAR-23	111
788	6000	26-APR-23	112

12 rows returned in 0.00 seconds CSV Export

SIMPLE QUERY TEST (SINGLE ROW)

1. Write a query to display the name, gender, and date of birth for all patients.

Autocommit Display 15

```
SELECT P_NAME, GENDER, DOB
FROM PATIENT
```

Results Explain Describe Saved SQL History

P_NAME	GENDER	DOB
ARIA REHMAN	FEMALE	05-DEC-98
TAKBIR ZAMAN	MALE	30-JUN-80
RENESA TAHSIN	FEMALE	12-FEB-95
TAWFIQ AHMED	MALE	23-FEB-96
TAHMID NIROB	MALE	10-MAR-05
TAMIM AHMED	MALE	12-MAR-00
SAKIB MAHMUD	MALE	25-NOV-10
MOHIMA REHMAN	FEMALE	24-DEC-90
ABIR ZAMAN	MALE	16-SEP-00
ZEBA TAHSIN	FEMALE	12-JAN-05
SADIA ALOM	FEMALE	18-MAY-92
RAKIB KHAN	MALE	25-AUG-85

12 rows returned in 0.00 seconds CSV Export

2. Create a query to display the name and salary of doctors earning more than 100000tk and they are specialist in neurology.

Autocommit Display 15

```
SELECT D_NAME, SALARY
FROM DOCTOR
WHERE SALARY > 100000 AND SPECIALIST='NEUROLOGIST'
```

Results Explain Describe Saved SQL History

D_NAME	SALARY
DR. TARIN	130000

1 rows returned in 0.00 seconds CSV Export

3. Display the id, names and duty time of all nurse where the second letter of their name is an R.

Autocommit Display 15

```
SELECT N_ID, N_NAME, DUTY_HOURS
FROM NURSE
WHERE N_NAME LIKE '_R%'
```

Results Explain Describe Saved SQL History

N_ID	N_NAME	DUTY_HOURS
408	PRIYA DAS	NIGHT SHIFT
410	ARPITA CHAKRABORTY	EVENING SHIFT
411	ARPA RAHMAN	EVENING SHIFT

3 rows returned in 0.00 seconds CSV Export

4. Display the patient id, admission date and release date of patients released between Mar-01-23and May-01-23. Order the query in ascending order by release date.

Autocommit Display 15

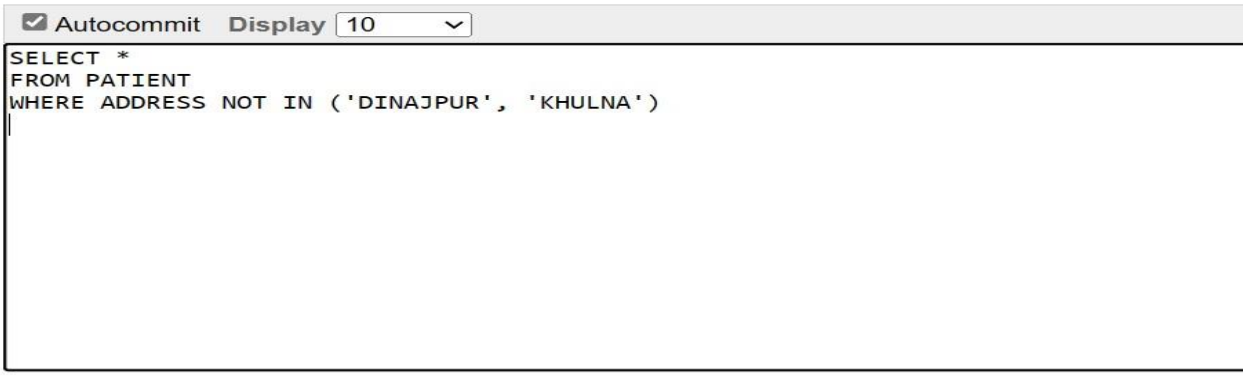
```
SELECT P_ID, ADMISSIONDATE, RELEASEDATE
FROM ADMISSION
WHERE RELEASEDATE BETWEEN '1-MAR-23' AND '1-MAY-23'
ORDER BY RELEASEDATE
```

Results Explain Describe Saved SQL History

P_ID	ADMISSIONDATE	RELEASEDATE
111	02-FEB-23	16-MAR-23
104	01-MAR-23	18-MAR-23
102	03-MAR-23	25-MAR-23
106	02-APR-23	06-APR-23
112	02-APR-23	26-APR-23

5 rows returned in 0.00 seconds CSV Export

5. Display the patient details who are not came from Dinajpur and Khulna.



Autocommit Display 10

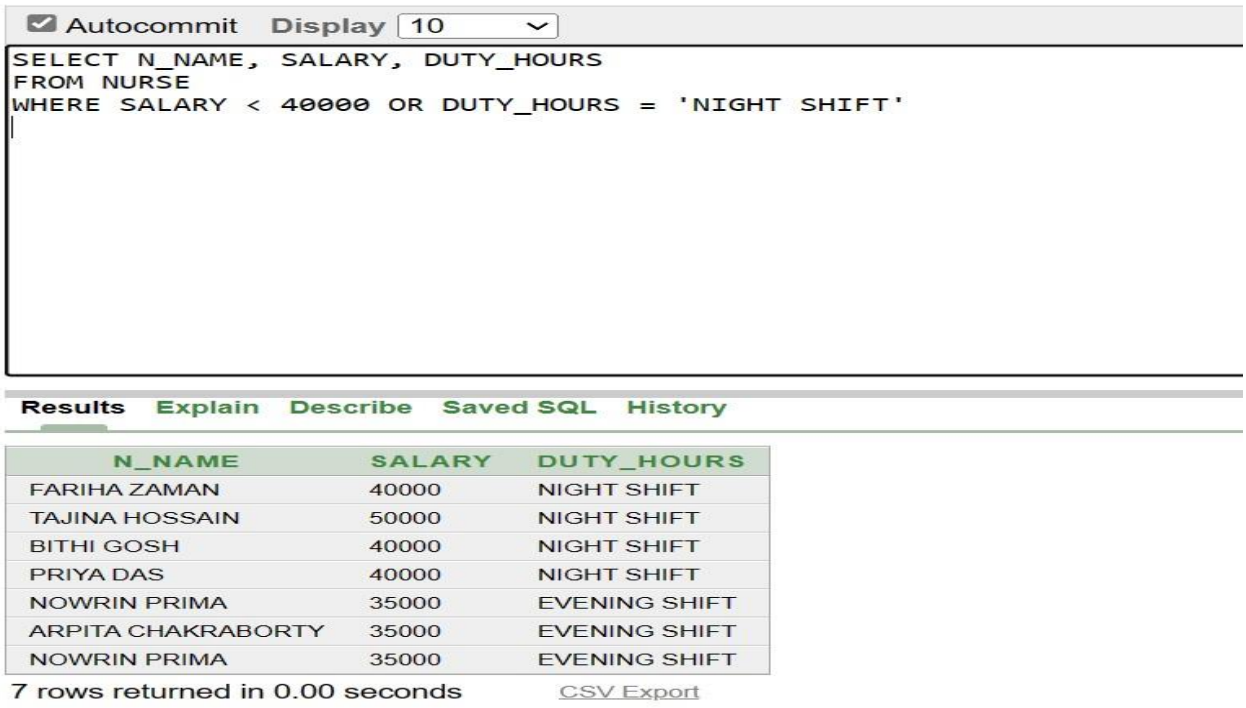
```
SELECT *
FROM PATIENT
WHERE ADDRESS NOT IN ('DINAJPUR', 'KHULNA')
```

Results Explain Describe Saved SQL History

P_ID	P_NAME	GENDER	DOB	ADDRESS	PHONE
103	ARIA REHMAN	FEMALE	05-DEC-98	SYLHET	01776543210
105	RENESA TAHSIN	FEMALE	12-FEB-95	RAJSHAHI	01987654321
106	TAWFIQ AHMED	MALE	23-FEB-96	RAJSHAHI	01587654331
108	TAMIM AHMED	MALE	12-MAR-00	DHAKA	01984454321
109	SAKIB MAHMUD	MALE	25-NOV-10	CHANDPUR	01846887766
110	MOHIMA REHMAN	FEMALE	24-DEC-90	CHITTAGONG	01799887766
112	ZEBA TAHSIN	FEMALE	12-JAN-05	RAJSHAHI	01537654321
101	SADIA ALOM	FEMALE	18-MAY-92	DHAKA	01611223344
102	RAKIB KHAN	MALE	25-AUG-85	CHITTAGONG	01899887766

9 rows returned in 0.00 seconds CSV Export

6. Create a query to display the name, salary and duty hours of nurses earning less than 40000tk or they are work in night shift.



Autocommit Display 10

```
SELECT N_NAME, SALARY, DUTY_HOURS
FROM NURSE
WHERE SALARY < 40000 OR DUTY_HOURS = 'NIGHT SHIFT'
```

Results Explain Describe Saved SQL History

N_NAME	SALARY	DUTY_HOURS
FARIHA ZAMAN	40000	NIGHT SHIFT
TAJINA HOSSAIN	50000	NIGHT SHIFT
BITHI GOSH	40000	NIGHT SHIFT
PRIYA DAS	40000	NIGHT SHIFT
NOWRIN PRIMA	35000	EVENING SHIFT
ARPITA CHAKRABORTY	35000	EVENING SHIFT
NOWRIN PRIMA	35000	EVENING SHIFT

7 rows returned in 0.00 seconds CSV Export

7. Display the doctor id, name, salary, and salary increase by 15% expressed as a whole number. Label the column New Salary.

Autocommit Display 15

```
SELECT D_ID, D_NAME, SALARY, ROUND(SALARY * 1.15) AS "New Salary"
FROM DOCTOR
```

Results Explain Describe Saved SQL History

D_ID	D_NAME	SALARY	New Salary
1	DR. REZWAN KHAN	120000	138000
2	DR. FARIDA AKHTAR	150000	172500
3	DR. RIJVIA KABIR	110000	126500
4	DR. TARIN	130000	149500
5	DR. NUSRAT JAHAN	140000	161000
6	DR. MAHI RAHMAN	115000	132250
7	DR. TANVIR ZAMAN	110000	126500
8	DR. SOWKAT ALAM	150000	172500
9	DR. SHOURADIP NANDI	100000	115000
10	DR. NOWROSE KHAN	90000	103500
11	DR. ANONNA RAHMAN	90000	103500
12	DR. JANNATUL FERDOUS	90000	103500
13	SATHI AKTER	90000	103500

13 rows returned in 0.00 seconds CSV Export

8. Display the patient id, appointment time and appointment date for all patient. Utilize the 'TO_CHAR' function to convert the 'appointment date' to a character format.

Autocommit Display 15

```
SELECT P_ID, APPOINTMENT_TIME, TO_CHAR(APPOINTMENT_DATE, 'DD-MONTH-YYYY') AS APPOINTMENT_DATE
FROM APPOINTMENT
```

Results Explain Describe Saved SQL History

P_ID	APPOINTMENT_TIME	APPOINTMENT_DATE
103	03:45 PM	03-FEBRUARY -2023
104	11:30 AM	10-FEBRUARY -2023
105	01:15 PM	11-FEBRUARY -2023
106	01:15 PM	18-MARCH -2023
107	02:00 PM	21-FEBRUARY -2023
108	08:00 PM	13-APRIL -2023
109	9:15 PM	23-FEBRUARY -2023
110	07:15 PM	11-MARCH -2023
111	07:15 PM	02-MARCH -2023
112	06:30 PM	01-FEBRUARY -2023
112	04:30 PM	01-FEBRUARY -2023
101	10:00 AM	10-JANUARY -2023
102	02:30 PM	12-JANUARY -2023

13 rows returned in 0.00 seconds CSV Export

AGGREGATE QUREY

1. Find average salary expressed as whole number, maximum, minimum, total salary of the doctors. Also show how many doctors are present in the hospital?

Autocommit Display 10

```
SELECT
    ROUND(AVG(SALARY)) AS AVERAGE_SALARY,
    MAX(SALARY) AS MAXIMUM_SALARY,
    MIN(SALARY) AS MINIMUM_SALARY,
    SUM(SALARY) AS TOTAL_SALARY,
    COUNT(D_ID) AS NUMBER_OF_DOCTORS
FROM DOCTOR
```

Results Explain Describe Saved SQL History

AVERAGE_SALARY	MAXIMUM_SALARY	MINIMUM_SALARY	TOTAL_SALARY	NUMBER_OF_DOCTORS
114231	150000	90000	1485000	13

1 rows returned in 0.00 seconds CSV Export

2. Find maximum salary of the nurses according to duty hours. Also the maximum salary should be greater than 40,000 tk.

Autocommit Display 15

```
SELECT DUTY_HOURS, MAX(SALARY) AS MAXIMUM_SALARY
FROM NURSE
GROUP BY DUTY_HOURS
HAVING MAX(SALARY)> 40000
```

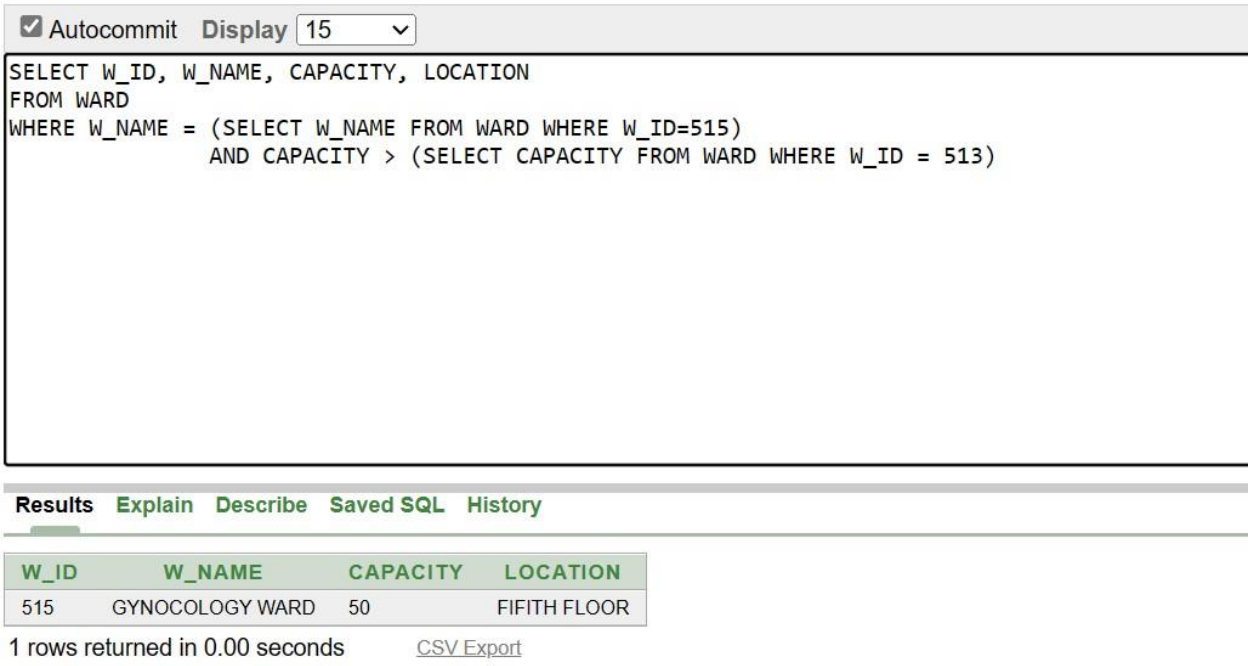
Results Explain Describe Saved SQL History

DUTY_HOURS	MAXIMUM_SALARY
EVENING SHIFT	45000
DAY SHIFT	60000
NIGHT SHIFT	50000

3 rows returned in 0.00 seconds CSV Export

SINGLE ROW SUBQUREY

1. Display the wards id, ward name, capacity, location where ward name is the same as that of ward 515 and the capacity is greater than ward 513.



Autocommit Display 15

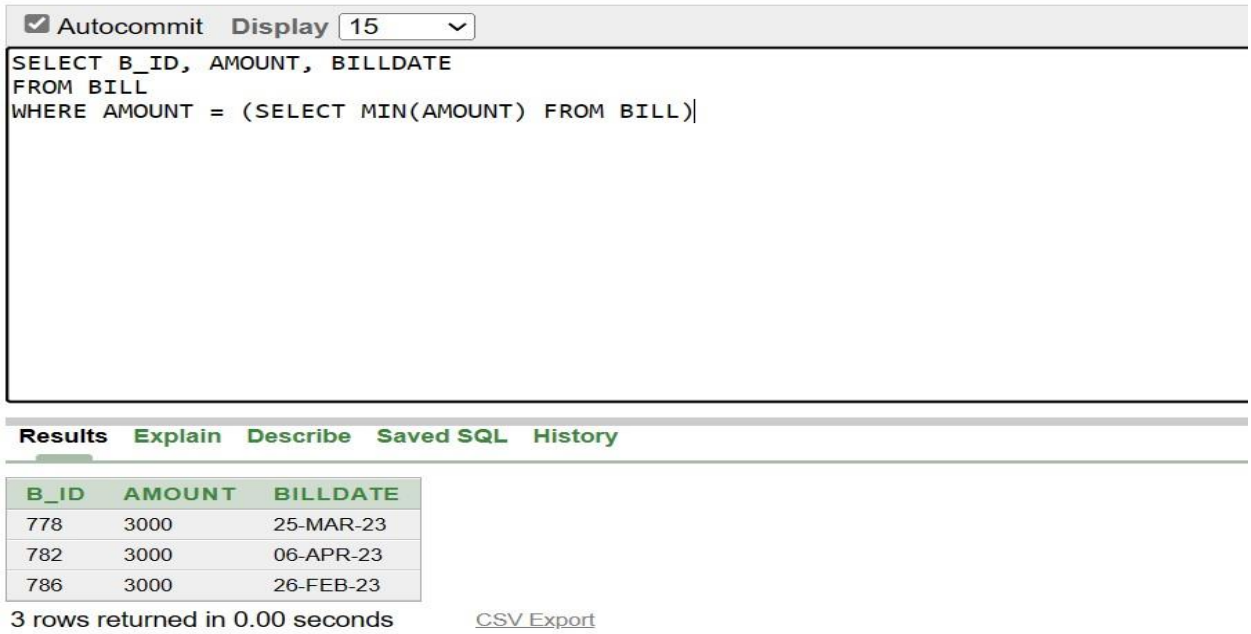
```
SELECT W_ID, W_NAME, CAPACITY, LOCATION
FROM WARD
WHERE W_NAME = (SELECT W_NAME FROM WARD WHERE W_ID=515)
               AND CAPACITY > (SELECT CAPACITY FROM WARD WHERE W_ID = 513)
```

Results Explain Describe Saved SQL History

W_ID	W_NAME	CAPACITY	LOCATION
515	GYNOCOLOGY WARD	50	FIFITH FLOOR

1 rows returned in 0.00 seconds CSV Export

2. Displays the bill id, amount, bill date of all patients where amount is equal to the minimum amount.



Autocommit Display 15

```
SELECT B_ID, AMOUNT, BILLDATE
FROM BILL
WHERE AMOUNT = (SELECT MIN(AMOUNT) FROM BILL)
```

Results Explain Describe Saved SQL History

B_ID	AMOUNT	BILLDATE
778	3000	25-MAR-23
782	3000	06-APR-23
786	3000	26-FEB-23

3 rows returned in 0.00 seconds CSV Export

MULTIPLE ROW SUBQUREY

1. Display doctor id, specialist & salaries of all the cardiologists who are earning more than all of the eye specialists.

Autocommit Display 15

```
SELECT D_ID, SPECIALIST, SALARY
FROM DOCTOR
WHERE SPECIALIST = 'CARDIOLOGIST'
  AND SALARY > ALL(SELECT SALARY FROM DOCTOR WHERE SPECIALIST = 'EYE SPECIASLIST')
```

Results Explain Describe Saved SQL History

D_ID	SPECIALIST	SALARY
1	CARDIOLOGIST	120000
10	CARDIOLOGIST	90000

2 rows returned in 0.00 seconds CSV Export

2. Display nurse id, duty hour & salaries of all the night shift nurse who are earning more than any of the day shift nurse.

Autocommit Display 10

```
SELECT N_ID, DUTY_HOURS, SALARY
FROM NURSE
WHERE DUTY_HOURS = 'NIGHT SHIFT'
  AND SALARY < ANY (SELECT SALARY FROM NURSE WHERE DUTY_HOURS = 'DAY SHIFT')
```

Results Explain Describe Saved SQL History

N_ID	DUTY_HOURS	SALARY
405	NIGHT SHIFT	40000
406	NIGHT SHIFT	50000
407	NIGHT SHIFT	40000
408	NIGHT SHIFT	40000

4 rows returned in 0.00 seconds CSV Export

JOINING

1. Display appointment no, appointment date, appointment time, doctor id, doctor name for all doctors.

Autocommit Display 15

```
SELECT A.A_NO, A.APPOINTMENT_DATE, A.APPOINTMENT_TIME, D.D_ID, D.D_NAME
FROM APPOINTMENT A, DOCTOR D
WHERE A.D_ID = D.D_ID
```

Results Explain Describe Saved SQL History

A_NO	APPOINTMENT_DATE	APPOINTMENT_TIME	D_ID	D_NAME
223	03-FEB-23	03:45 PM	3	DR. RIJVIA KABIR
224	10-FEB-23	11:30 AM	4	DR. TARIN
225	11-FEB-23	01:15 PM	5	DR. NUSRAT JAHAN
226	18-MAR-23	01:15 PM	6	DR. MAHI RAHMAN
227	21-FEB-23	02:00 PM	7	DR. TANVIR ZAMAN
228	13-APR-23	08:00 PM	8	DR. SOWKAT ALAM
229	23-FEB-23	9:15 PM	9	DR. SHOURADIP NANDI
230	11-MAR-23	07:15 PM	10	DR. NOWROSE KHAN
231	02-MAR-23	07:15 PM	11	DR. ANONNA RAHMAN
232	01-FEB-23	06:30 PM	12	DR. JANNATUL FERDOUS
233	01-FEB-23	04:30 PM	13	SATHI AKTER
221	10-JAN-23	10:00 AM	1	DR. REZWAN KHAN
222	12-JAN-23	02:30 PM	2	DR. FARIDA AKHTAR

13 rows returned in 0.00 seconds CSV Export

2. Display bill id, amount, date, patient id, patient name for all patients.

Autocommit Display 15

```
SELECT B.B_ID, B.AMOUNT, B.BILLsDATE, P.P_ID, P.P_NAME
FROM BILL B, PATIENT P
WHERE B.P_ID = P.P_ID
```

Results Explain Describe Saved SQL History

B_ID	AMOUNT	BILLDATE	P_ID	P_NAME
777	5000	15-JAN-23	101	SADIA ALOM
778	3000	25-MAR-23	102	RAKIB KHAN
779	4500	26-FEB-23	103	ARIA REHMAN
780	6000	18-MAR-23	104	TAKBIR ZAMAN
781	5000	14-JAN-23	105	RENESA TAHSIN
782	3000	06-APR-23	106	TAWFIQ AHMED
783	4500	26-FEB-23	107	TAHMID NIROB
784	6000	26-FEB-23	108	TAMIM AHMED
785	5000	26-FEB-23	109	SAKIB MAHMUD
786	3000	26-FEB-23	110	MOHIMA REHMAN
787	4500	16-MAR-23	111	ABIR ZAMAN
788	6000	26-APR-23	112	ZEBA TAHSIN

12 rows returned in 0.00 seconds CSV Export

3. Retrieve the appointment number, appointment date, appointment time, patient id, patient name for all patients. Include patient id even if there are no matching patients. Order the results by patient id ascending order.

Autocommit Display 15

```
SELECT A.A_NO, A.APPOINTMENT_DATE, A.APPOINTMENT_TIME, P.P_ID, P.P_NAME
FROM APPOINTMENT A , PATIENT P
WHERE A.P_ID(+) = P.P_ID
ORDER BY P.P_ID
```

Results Explain Describe Saved SQL History

A_NO	APPOINTMENT_DATE	APPOINTMENT_TIME	P_ID	P_NAME
221	10-JAN-23	10:00 AM	101	SADIA ALOM
222	12-JAN-23	02:30 PM	102	RAKIB KHAN
223	03-FEB-23	03:45 PM	103	ARIA REHMAN
224	10-FEB-23	11:30 AM	104	TAKBIR ZAMAN
225	11-FEB-23	01:15 PM	105	RENESA TAHSIN
226	18-MAR-23	01:15 PM	106	TAWFIQ AHMED
227	21-FEB-23	02:00 PM	107	TAHMID NIROB
228	13-APR-23	08:00 PM	108	TAMIM AHMED
229	23-FEB-23	9:15 PM	109	SAKIB MAHMUD
230	11-MAR-23	07:15 PM	110	MOHIMA REHMAN
231	02-MAR-23	07:15 PM	111	ABIR ZAMAN
232	01-FEB-23	06:30 PM	112	ZEBA TAHSIN
233	01-FEB-23	04:30 PM	112	ZEBA TAHSIN
-	-	-	113	ZAHIR REHMAN

14 rows returned in 0.02 seconds CSV Export

VIEW

1. Create a view called NURSE_VU based on the nurse id, name, and duty hour from the nurse table. Order the query in descending order by nurse id.

Autocommit Display 15

```
CREATE VIEW NURSE_VU AS
SELECT N_ID, N_NAME, DUTY_HOURS
FROM NURSE


SELECT *
FROM NURSE_VU
ORDER BY N_ID DESC
```

Results Explain Describe Saved SQL History

N_ID	N_NAME	DUTY_HOURS
412	NOWRIN PRIMA	EVENING SHIFT
411	ARPA RAHMAN	EVENING SHIFT
410	ARPITA CHAKRABORTY	EVENING SHIFT
409	NOWRIN PRIMA	EVENING SHIFT
408	PRIYA DAS	NIGHT SHIFT
407	BITHI GOSH	NIGHT SHIFT
406	TAJINA HOSSAIN	NIGHT SHIFT
405	FARIHA ZAMAN	NIGHT SHIFT
404	MAHIMA RAHMAN	DAY SHIFT
403	MAHIMA RAHMAN	DAY SHIFT
402	MALIHA MUMU	DAY SHIFT
401	TORSHA RAHMAN	DAY SHIFT

12 rows returned in 0.00 seconds CSV Export

2. Create a view called SALARY_VU based on the doctor name, specialist, salary for all doctors. Label the column name as doctor name.

Autocommit Display 15

```
CREATE VIEW SALARY_VU AS
SELECT D_NAME AS DOCTOR_NAME, SPECIALIST, SALARY
FROM DOCTOR


SELECT *
FROM SALARY_VU
```

Results Explain Describe Saved SQL History

DOCTOR_NAME	SPECIALIST	SALARY
DR. REZWAN KHAN	CARDIOLOGIST	120000
DR. FARIDA AKHTAR	ORTHOPEDIC SURGEON	150000
DR. RIJVIA KABIR	NURTRITIONIST	110000
DR. TARIN	NEUROLOGIST	130000
DR. NUSRAT JAHAN	DERMATOLOGIST	140000
DR. MAHI RAHMAN	MEDICINE	115000
DR. TANVIR ZAMAN	DENTIST	110000
DR. SOWKAT ALAM	NEOROSURGEN	150000
DR. SHOURADIP NANDI	EYE SPECIALIST	100000
DR. NOWROSE KHAN	CARDIOLOGIST	90000
DR. ANONNA RAHMAN	GYNECOLOGIST	90000
DR. JANNATUL FERDOUS	EYE SPECIALIST	90000
SATHI AKTER	GYNOCOLOGEST	90000

13 rows returned in 0.00 seconds CSV Export

3. Create a view named BILL_VW that provides the bill id, amount, bill date, patient id, patient name for all patients.

Autocommit Display 15

```
CREATE VIEW BILL_VW AS
SELECT B.B_ID, B.AMOUNT, B.BILLDATE, P.P_ID, P.P_NAME
FROM BILL B, PATIENT P
WHERE B.P_ID = P.P_ID


SELECT *
FROM BILL_VW
```

Results Explain Describe Saved SQL History

B_ID	AMOUNT	BILLDATE	P_ID	P_NAME
777	5000	15-JAN-23	101	SADIA ALOM
778	3000	25-MAR-23	102	RAKIB KHAN
779	4500	26-FEB-23	103	ARIA REHMAN
780	6000	18-MAR-23	104	TAKBIR ZAMAN
781	5000	14-JAN-23	105	RENESA TAHSIN
782	3000	06-APR-23	106	TAWFIQ AHMED
783	4500	26-FEB-23	107	TAHMID NIROB
784	6000	26-FEB-23	108	TAMIM AHMED
785	5000	26-FEB-23	109	SAKIB MAHMUD
786	3000	26-FEB-23	110	MOHIMA REHMAN
787	4500	16-MAR-23	111	ABIR ZAMAN
788	6000	26-APR-23	112	ZEBA TAHSIN

12 rows returned in 0.01 seconds CSV Export

DATABASE CONNECTION

Setting Up Java-MySQL Connection

1. TO connect Java with MySQL, I got the necessary Connector/J JAR file from MySQL's official website. I went to "https://dev.mysql.com/downloads/connector/j/" and picked the right version for my project.

2. To connect Database with JDBC we have used MYSQL, XAMPP, NETBEANS.

3. We started the XAMPP app then start both Apache & MYSQL.

4. Then we entered into admin MYSQL panel then created a Database & created, inserted the values of the table.

D_ID	D_NAME	SPECIALIST	SALARY	PHONE
1	DR. REZWAN KHAN	CARDIOLOGIST	120000	01987654321
2	DR. FARIDA AKHTAR	ORTHOPEDIC SURGEON	150000	01765432109
3	DR. RIJVIA KABIR	NURTRITIONIST	110000	01876543210
4	DR. TARIN	NEUROLOGIST	130000	01554332211
5	DR. NUSRAT JAHAN	DERMATOLOGIST	140000	01678787878
6	DR. MAHI RAHMAN	MEDICINE	115000	01876543216
7	DR. TANVIR ZAMAN	DENTIST	110000	01876543217
8	DR. SOWKAT ALAM	NEOROSURGEN	150000	01876543218
9	DR. SHOURADIP NANDI	EYE SPECIALIST	100000	01876543219
10	DR. NOWROSE KHAN	CARDIOLOGIST	90000	01876543220

Setting Up MySQL Connectivity:

- ### Registering the Driver:

I initiated by registering the MySQL JDBC driver. This step allows my Java code to understand how to communicate with the MySQL database.

- ### Connecting to the Database:

Next, I established a connection to the MySQL database. This connection forms a secure pathway for my Java code to interact with the data.

- ### Creating a Statement:

With the connection in place, I moved on to create a statement object. This object is like a messenger that conveys my SQL queries to the database.

- ### Executing Queries and Obtaining Results:

I effectively executed my SQL queries using the statement object. This step resulted in a Result Set, containing the data I needed from the database.

- ### Closing the Connection:

After finishing the necessary operations, I ensured proper resource management by closing the connection. This step prevents unnecessary resource usage.

Start Page | JavaDatabase.java

Source | History

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 */

package com.mycompany.javadatabase;
import java.sql.*;

/**
 *
 * @author User
 */
public class JavaDatabase {

    public static void main(String[] args) throws ClassNotFoundException, SQLException {

     Class.forName("com.mysql.cj.jdbc.Driver");
        String user = "root";
        String password = "";
        String url = "jdbc:mysql://127.0.0.1:3306/doctor?serverTimezone=UTC";
        Connection conn = DriverManager.getConnection(url, user, password);
        Statement statement = conn.createStatement();

        String query = "SELECT * FROM doctor ";
        ResultSet result = statement.executeQuery(query);
        while(result.next())
        {
            String D_id, D_name,Specialist,Salary,Phone;
            D_id= result.getString("D_id");
            D_name = result.getString("D_name");
            Specialist = result.getString("Speialist");
            Salary = result.getString("Salary");
            Phone = result.getString("Phone");
            System.out.println(D_id+" "+D_name+" "+Specialist+" "+Salary+" "+Phone);
        }

        statement.close();
        conn.close();
    }
}
```

CONCLUSION

The Indoor Hospital Management System Database Project is a pivotal solution designed to revolutionize healthcare administration. By providing an efficient and structured database management system, the project aims to enhance data accuracy, streamline operations, and promote patient-centric care. As it nears completion, this project aspires to contribute to the optimization of healthcare services, fostering improved patient outcomes and operational efficiency within the hospital ecosystem.