

Mini Project in Databases - part 2

Quarries:

--: כדי לקבל פרטי אשפוז יחד עם פרטי שחרור מתאימים Select שאילתת--:

```
SELECT
    A.admissionID,
    A.admission_date,
    D.dischargeDate,
    P.name,
    EXTRACT(YEAR FROM A.admission_date) AS admission_year,
    EXTRACT(MONTH FROM A.admission_date) AS admission_month,
    EXTRACT(DAY FROM A.admission_date) AS admission_day,
    EXTRACT(YEAR FROM D.dischargeDate) AS discharge_year,
    EXTRACT(MONTH FROM D.dischargeDate) AS discharge_month,
    EXTRACT(DAY FROM D.dischargeDate) AS discharge_day
FROM
    Admission A
JOIN
    Admission_Discharge AD ON A.admissionID = AD.admissionID
JOIN
    Discharge D ON AD.dischargeID = D.dischargeID
JOIN
    Patient P ON A.patientID = P.patientID
ORDER BY
    A.admission_date;
```

	ADMISSIONID	ADMISSION_DATE	DISCHARGEDATE	NAME	ADMISSION_YEAR	ADMISSION_MONTH	ADMISSION_DAY	DISCHARGE_YEAR
1	1011	1/12/2023	4/25/2440	Ty	2023	1	12	
2	1207	1/14/2023	5/24/2240	Michael	2023	1	14	
3	1031	1/23/2023	4/2/2091	Bernard	2023	1	23	
4	1089	1/25/2023	3/8/2701	Fairuza	2023	1	25	
5	1044	1/27/2023	10/27/2580	Davis	2023	1	27	
6	1007	2/3/2023	7/31/2538	Junior	2023	2	3	
7	1221	2/6/2023	1/20/2869	Al	2023	2	6	
8	1090	2/12/2023	7/21/2627	Mika	2023	2	12	
9	1004	2/14/2023	12/10/2696	Shannon	2023	2	14	
10	1074	2/14/2023	8/29/3035	Anita	2023	2	14	
11	1204	2/15/2023	9/3/3072	Jean	2023	2	15	

--: כדי לקבל את הסכום הכולל ששולם על ידי כל מטופל יחד עם תאריכי האשפוז והשחרור Select שאילתת--

```
SELECT
    P.name,
    SUM(Pay.amount) AS total_amount,
    A.admission_date,
    D.dischargeDate,
    EXTRACT(YEAR FROM A.admission_date) AS admission_year,
    EXTRACT(MONTH FROM A.admission_date) AS admission_month,
    EXTRACT(DAY FROM A.admission_date) AS admission_day,
    EXTRACT(YEAR FROM D.dischargeDate) AS discharge_year,
    EXTRACT(MONTH FROM D.dischargeDate) AS discharge_month,
    EXTRACT(DAY FROM D.dischargeDate) AS discharge_day
FROM
    Patient P
JOIN
    Admission A ON P.patientID = A.patientID
JOIN
    Admission_Discharge AD ON A.admissionID = AD.admissionID
JOIN
    Discharge D ON AD.dischargeID = D.dischargeID
JOIN
    Payment Pay ON D.dischargeID = Pay.dischargeID
GROUP BY
    P.name, A.admission_date, D.dischargeDate
ORDER BY
```

	NAME	TOTAL_AMOUNT	ADMISSION_DATE	DISCHARGEDATE	ADMISSION_YEAR	ADMISSION_MONTH	ADMISSION_DAY	DISCHARGE_YI
1	Adam	49000	3/8/2024	10/24/2735	2024	3	8	
2	Aimee	48815	8/12/2023	11/11/2858	2023	8	12	
3	Alannah	32945	8/13/2023	5/20/2106	2023	8	13	
4	Alannah	28262	2/25/2024	5/8/2144	2024	2	25	
5	Alex	25916	2/20/2023	8/8/3044	2023	2	20	
6	Allison	25065	1/6/2024	2/15/2258	2024	1	6	
7	Amanda	1365	1/27/2024	8/19/2091	2024	1	27	
8	Andie	71837	3/18/2024	11/28/2119	2024	3	18	
9	Ani	38540	4/23/2023	12/5/2589	2023	4	23	
10	Anita	11840	2/14/2023	8/29/3035	2023	2	14	

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תצוין את מספר האשפוזים בכל מחלקה לפי חודש ושנה--

```

SELECT
    A.ward,
    COUNT(A.admissionID) AS admission_count,
    EXTRACT(YEAR FROM A.admission_date) AS admission_year,
    EXTRACT(MONTH FROM A.admission_date) AS admission_month
FROM
    Admission A
GROUP BY
    A.ward,
    EXTRACT(YEAR FROM A.admission_date),
    EXTRACT(MONTH FROM A.admission_date)
ORDER BY
    A.ward,
    EXTRACT(YEAR FROM A.admission_date),
    EXTRACT(MONTH FROM A.admission_date);

```

	WARD	ADMISSION_COUNT	ADMISSION_YEAR	ADMISSION_MONTH
1	Cardiology	1	2023	3
2	Cardiology	1	2023	4
3	Cardiology	2	2023	5
4	Cardiology	2	2023	6
5	Cardiology	2	2023	7
6	Cardiology	4	2023	8
7	Cardiology	4	2023	9
8	Cardiology	3	2023	10
9	Cardiology	5	2023	11
10	Cardiology	6	2023	12
11	Cardiology	6	2024	1

81:1 [434] c##ariel@XE [6:07:13 PM] 11 rows selected in

--: כדי לקבל פרטי מטופלים שאושפזו ושוחררו באותו החודש Select שאילתת--

```

SELECT
    P.name,
    EXTRACT(YEAR FROM A.admission_date) AS admission_year,
    EXTRACT(MONTH FROM A.admission_date) AS admission_month,
    EXTRACT(DAY FROM A.admission_date) AS admission_day,
    EXTRACT(YEAR FROM D.dischargeDate) AS discharge_year,
    EXTRACT(MONTH FROM D.dischargeDate) AS discharge_month,
    EXTRACT(DAY FROM D.dischargeDate) AS discharge_day
FROM
    Patient P
JOIN
    Admission A ON P.patientID = A.patientID
JOIN
    Admission_Discharge AD ON A.admissionID = AD.admissionID
JOIN
    Discharge D ON AD.dischargeID = D.dischargeID
WHERE
    EXTRACT(MONTH FROM A.admission_date) = EXTRACT(MONTH FROM D.dischargeDate)
ORDER BY
    P.name;

```

NAME		ADMISSION_YEAR	ADMISSION_MONTH	ADMISSION_DAY	DISCHARGE_YEAR	DISCHARGE_MONTH	DISCHARGE_DAY
Ben	***	2023	3	27	2811	3	27
Billy	***	2023	2	16	2361	2	17
Buffy	***	2024	3	29	2232	3	29
Chely	***	2023	11	6	2750	11	15
Chrissie	***	2023	10	15	2430	10	13
Daniel	***	2023	10	1	2778	10	1
Dar	***	2023	4	11	3033	4	28
Dennis	***	2023	7	1	2355	7	24
Dermot	***	2023	10	5	2089	10	19
Donal	***	2023	7	27	2718	7	27
Forest	***	2023	2	16	2805	2	23

107:1 [693] c##ariel@XE [6:08:19 PM] 11 rows selected in 0.037 seconds (more...)

Updates:

		NAME	WARD	DOCTORID
▶	1	Allison ***	Surgery ***	999

לשינוי מחלקה ורופא עבור אשפוז של מטופל מסוים Update שאילתת--

```
UPDATE Admission A
SET A.ward = 'Emergency', A.doctorID = 555
WHERE A.admissionID IN (
    SELECT AD.admissionID
    FROM Admission_Discharge AD
    JOIN Admission A2 ON AD.admissionID = A2.admissionID
    JOIN Patient P ON A2.patientID = P.patientID
    WHERE P.name = 'Allison'
);
```

		NAME	WARD	DOCTORID
▶	1	Allison ***	Emergency ***	555

		DISCHARGEID	DISCHARGEDATE
▶	1	1001	12/31/2025 ***

לשינוי תאריך השחרור עבור אשפוז מסוים Update שאילתת--

```
UPDATE Discharge D
SET D.dischargeDate = DATE '2026-1-15'
WHERE D.dischargeID = (
    SELECT AD.dischargeID
    FROM Admission_Discharge AD
    JOIN Admission A ON AD.admissionID = A.admissionID
    WHERE A.admissionID = 1001
);
```

		DISCHARGEID	DISCHARGEDATE
	1	1001	1/15/2026 ***

Deletes:

		ADMISSIONID
▶	1	1011
	2	1031
	3	1044
	4	1089
	5	1207

/*-----DELETE-----

--לאשפוזים ושחרורים מתאימים עבור מטופל מסוים Delete שאלתת:

```
SELECT admissionID FROM Admission WHERE admission_date < DATE '2023-02-1'
```

-- עבור תאריך מסוים Admission_Discharge מחיקת רשומות בטבלת

```
DELETE FROM Admission_Discharge
```

```
WHERE admissionID IN (
```

```
    SELECT admissionID
```

```
    FROM Admission
```

```
    WHERE admission_date = DATE '2023-01-12'
```

```
);
```

-- עבור תאריך מסוים Admission מחיקת רשומות בטבלת

```
DELETE FROM Admission
```

```
WHERE admission_date = DATE '2023-01-12';
```

```
SELECT admissionID FROM Admission WHERE admission_date < DATE '2023-02-1';
```

		ADMISSIONID
▶	1	1031
	2	1044
	3	1089
	4	1207

	ADMISSIONID	ADMISSION_DATE	WARD	PATIENT_NAME
▶ 1	1498	10/17/2023	General Medicine	Blair

--לאשפוזים ושחרורים מתאימים עבור מטופל מסוים Delete שאלתת--

```
DELETE FROM Admission_Discharge
WHERE admissionID IN (
  SELECT A.admissionID
  FROM Admission A
  JOIN Patient P ON A.patientID = P.patientID
  WHERE P.name = 'Blair'
);

DELETE FROM Admission
WHERE admissionID IN (
  SELECT A.admissionID
  FROM Admission A
  JOIN Patient P ON A.patientID = P.patientID
  WHERE P.name = 'Blair'
);

DELETE FROM Patient p
WHERE P.name = 'Blair';
```

NAME

Parameters Quarries:

```

-- select patient with a specific name.
SELECT * FROM Patient
WHERE name = 'John';

-- selects all patients admitted in the aloted time frame.
SELECT * FROM Admission
WHERE admission_date BETWEEN date '2024-01-01' AND date '2024-03-31';

-- selects a specific id from discharge table with priority to the listed id's.
SELECT * FROM Discharge
WHERE dischargeID IN (<name="DischargeID List" list="1000, 1002, 1111, 1222, 1300">);

-- selects all patients with a certain birthday(given a hint).
CREATE INDEX patient_birthdate_idx ON Patient(birthdate);
SELECT /* INDEX(patient_birthdate_idx) */ * FROM Patient
WHERE birthdate = date '2007-10-09';

```

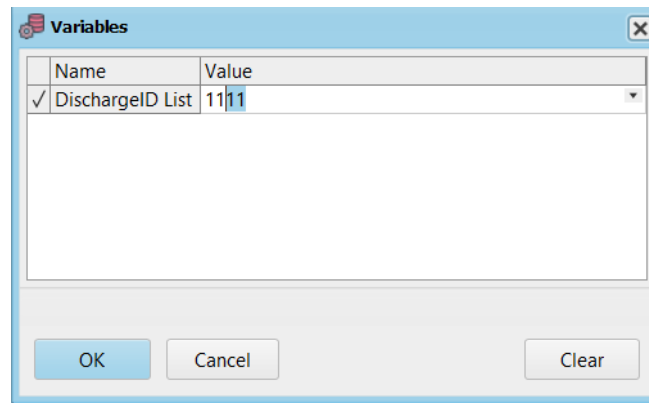
1.

	NAME	ADDRESS	CONTACT_INFO	PATIENTID	INSURANCEID	BIRTHDATE	PAYMENTID
▶ 1	John	89 Haslam Road	john.metcalf@studiobpproductions.com	1188	196	11/11/2022	1009

2.

	ADMISSION_DATE	ADMISSIONID	WARD	DOCTORID	PATIENTID	RECORDID
▶ 1	2/16/2024	1012	Emergency	175	1012	1012
2	1/6/2024	1013	Emergency	555	1013	1013
3	1/13/2024	1028	Oncology	233	1028	1028
4	1/11/2024	1030	Emergency	722	1030	1030
5	2/13/2024	1038	Surgery	873	1038	1038
6	3/6/2024	1039	Emergency	688	1039	1039

3.



		DISCHARGEID	DISCHARGE_DOCTORID	DISCHARGEDATE	
▶	1	1111	211	7/28/2965	***

4.

		NAME	ADDRESS	CONTACT_INFO	PATIENTID	INSURANCEID	BIRTHDATE	PAYMENTID	
▶	1	Gino	345 Rob Road	gino@procurementcentre.ca	1021	597	10/9/2007	1480	***

Constraints:

```
--This constraint ensures that the contact_info column in the Patient table cannot contain NULL values.
ALTER TABLE Patient
MODIFY contact_info VARCHAR2(255) NOT NULL;
--problem it already has a not null value(all the tables have it).

--This constraint ensures that the "amount" column in the payment table must always
--contain a value greater than 0.
ALTER TABLE Payment
ADD CONSTRAINT chk_amount CHECK (amount > 0);
/*
This constraint sets a DEFAULT constraint on this column to use SYSDATE(the current date and time),
when no value is explicitly provided.
*/
ALTER TABLE Admission
MODIFY admission_date DATE DEFAULT SYSDATE;
```

Alter Tables:

```
CREATE TABLE Admission_Discharge (  
    admissionID INT NOT NULL,  
    dischargeID INT NOT NULL,  
    PRIMARY KEY (admissionID, dischargeID),  
    FOREIGN KEY (admissionID) REFERENCES Admission(admissionID),  
    FOREIGN KEY (dischargeID) REFERENCES Discharge(dischargeID)  
);  
  
INSERT INTO Admission_Discharge (admissionID, dischargeID)  
SELECT A.admissionID, D.dischargeID  
FROM Admission A  
JOIN Medical_Record MR ON A.recordID = MR.recordID  
JOIN Discharge D ON MR.dischargeID = D.dischargeID;
```