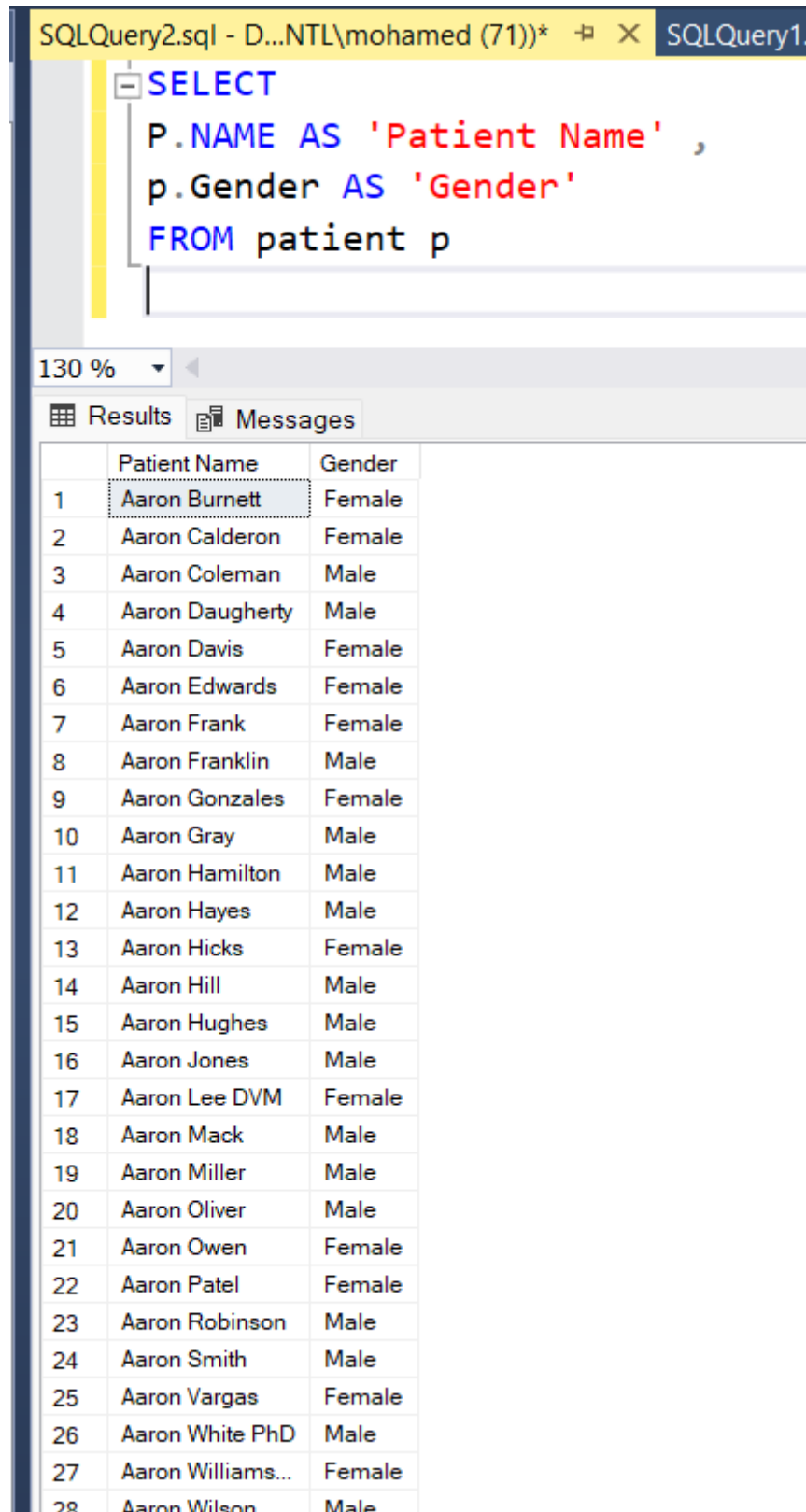


SQL PROJECT I

1. Retrieve the names and genders of all patients.



The screenshot shows a SQL Server Enterprise Manager window with a query editor and a results grid. The query editor displays the following SQL statement:

```
SELECT  
P.NAME AS 'Patient Name' ,  
p.Gender AS 'Gender'  
FROM patient p
```

Below the query editor, the 'Results' tab is active, showing a table with 28 rows and 2 columns: 'Patient Name' and 'Gender'. The first row is highlighted.

| | Patient Name | Gender |
|----|-------------------|--------|
| 1 | Aaron Burnett | Female |
| 2 | Aaron Calderon | Female |
| 3 | Aaron Coleman | Male |
| 4 | Aaron Daugherty | Male |
| 5 | Aaron Davis | Female |
| 6 | Aaron Edwards | Female |
| 7 | Aaron Frank | Female |
| 8 | Aaron Franklin | Male |
| 9 | Aaron Gonzales | Female |
| 10 | Aaron Gray | Male |
| 11 | Aaron Hamilton | Male |
| 12 | Aaron Hayes | Male |
| 13 | Aaron Hicks | Female |
| 14 | Aaron Hill | Male |
| 15 | Aaron Hughes | Male |
| 16 | Aaron Jones | Male |
| 17 | Aaron Lee DVM | Female |
| 18 | Aaron Mack | Male |
| 19 | Aaron Miller | Male |
| 20 | Aaron Oliver | Male |
| 21 | Aaron Owen | Female |
| 22 | Aaron Patel | Female |
| 23 | Aaron Robinson | Male |
| 24 | Aaron Smith | Male |
| 25 | Aaron Vargas | Female |
| 26 | Aaron White PhD | Male |
| 27 | Aaron Williams... | Female |
| 28 | Aaron Wilson | Male |

2. Display all patients with blood type O+

SQLQuery2.sql - D:\NTL\mohamed (71)) * X SQLQuery1.sql - D:\NTL\mohamed (66))

```
--2.Display all patients with blood type O+  
CREATE INDEX idx_blood_type ON dbo.patient(bloodType)  
  
SELECT * FROM patient  
WHERE bloodType = 'O+'  
--
```

130 %

Results Messages

| | id | Name | Age | Gender | bloodType | MedicalCondition | DateOfAmission |
|----|-----|--------------------|-----|--------|-----------|------------------|----------------|
| 1 | 17 | Aaron Lee DVM | 67 | Female | O+ | Cancer | 2021-02-09 |
| 2 | 37 | Abigail Watson | 61 | Male | O+ | Diabetes | 2019-03-26 |
| 3 | 52 | Adam Dominguez | 77 | Male | O+ | Cancer | 2021-03-19 |
| 4 | 57 | Adam Johnson | 43 | Male | O+ | Asthma | 2021-03-19 |
| 5 | 58 | Adam Jones | 68 | Female | O+ | Asthma | 2021-08-28 |
| 6 | 64 | Adam Patel | 34 | Male | O+ | Arthritis | 2021-07-19 |
| 7 | 80 | Adriana Murphy | 54 | Male | O+ | Obesity | 2021-03-01 |
| 8 | 92 | Alan Ibarra | 34 | Male | O+ | Arthritis | 2020-03-26 |
| 9 | 94 | Alan Rodriguez | 42 | Male | O+ | Asthma | 2023-06-14 |
| 10 | 102 | Albert Gordon | 79 | Female | O+ | Cancer | 2021-07-05 |
| 11 | 112 | Alejandra Hall | 38 | Female | O+ | Asthma | 2023-04-29 |
| 12 | 122 | Alex Maynard | 19 | Female | O+ | Diabetes | 2020-02-15 |
| 13 | 128 | Alexa Jensen | 18 | Male | O+ | Asthma | 2022-08-10 |
| 14 | 130 | Alexander Davis | 33 | Male | O+ | Obesity | 2022-09-23 |
| 15 | 133 | Alexander Harris | 65 | Male | O+ | Arthritis | 2021-01-03 |
| 16 | 139 | Alexander Sanford | 40 | Female | O+ | Hypertension | 2023-10-23 |
| 17 | 145 | Alexander Watts | 36 | Male | O+ | Diabetes | 2022-01-15 |
| 18 | 149 | Alexandra Bailey | 36 | Male | O+ | Hypertension | 2022-08-01 |
| 19 | 151 | Alexandra Davidson | 26 | Female | O+ | Obesity | 2021-04-24 |
| 20 | 165 | Alexandria Nelson | 84 | Male | O+ | Hypertension | 2020-01-13 |
| 21 | 173 | Alexis Huynh | 54 | Female | O+ | Asthma | 2019-06-30 |
| 22 | 202 | Alicia Peters | 71 | Female | O+ | Arthritis | 2020-05-29 |
| 23 | 224 | Allison Davidson | 52 | Female | O+ | Diabetes | 2022-04-14 |
| 24 | 242 | Allison Wilkins | 29 | Female | O+ | Obesity | 2020-03-31 |
| 25 | 244 | Allison Woods | 78 | Female | O+ | Asthma | 2019-07-28 |
| 26 | 256 | Alyssa Richmond | 28 | Female | O+ | Hypertension | 2023-02-14 |
| 27 | 259 | Alyssa Wright | 71 | Female | O+ | Hypertension | 2021-03-02 |
| 28 | 268 | Amanda Ryan | 84 | Male | O+ | Cancer | 2019-05-20 |

3. Count the number of patients in each blood type

```
-- Count the number of patients in each blood type.
```

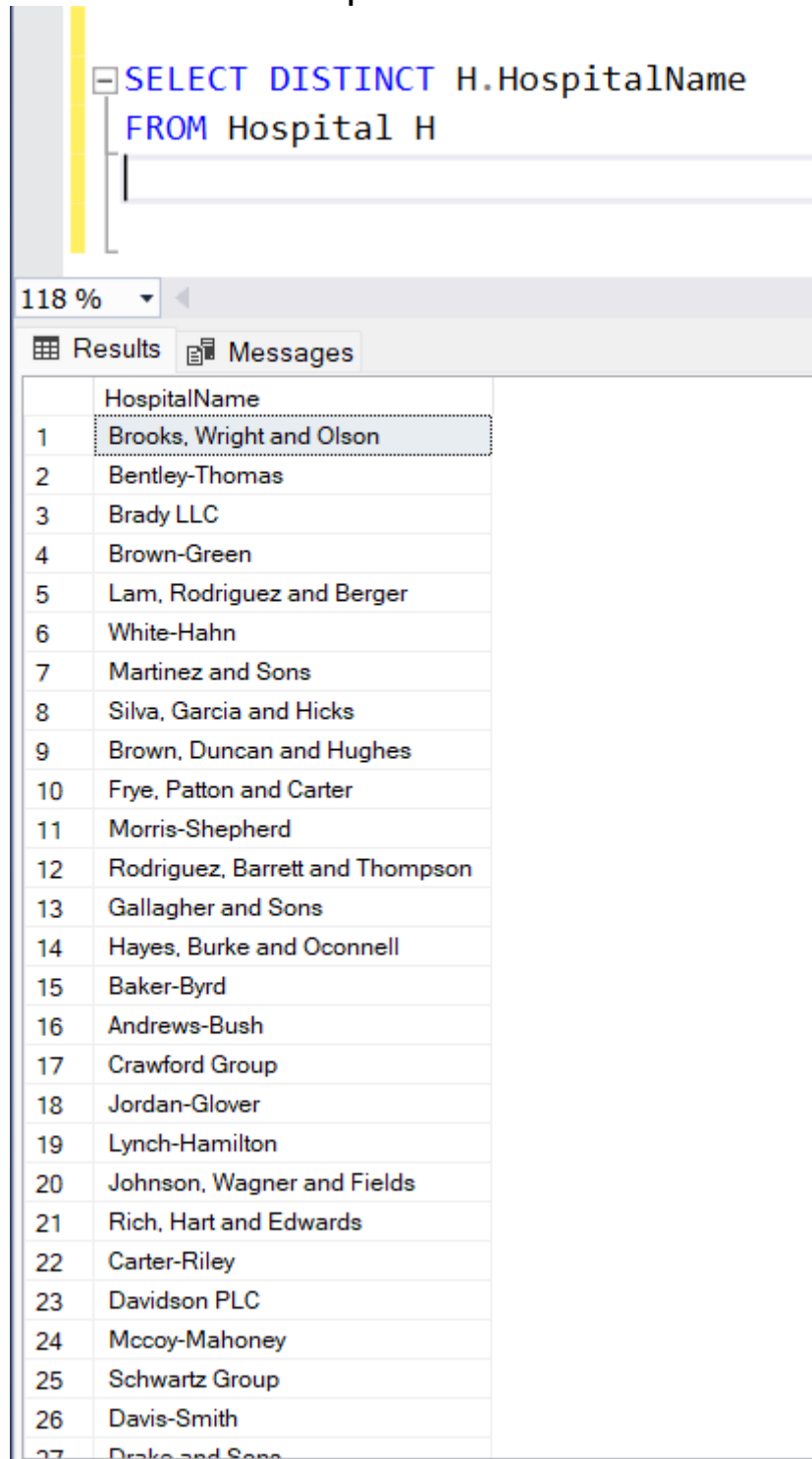
```
SELECT P.bloodType ,COUNT(DISTINCT(P.id)) AS 'Total number of patients'  
FROM patient P  
GROUP BY P.bloodType
```

130 %

Results Messages

| | bloodType | Total number of patients |
|---|-----------|--------------------------|
| 1 | A- | 1175 |
| 2 | A+ | 1150 |
| 3 | AB- | 1186 |
| 4 | AB+ | 1189 |
| 5 | B- | 1183 |
| 6 | B+ | 1160 |
| 7 | O- | 1160 |
| 8 | O+ | 1175 |

4. List all distinct hospital names.



```
SELECT DISTINCT H.HospitalName
FROM Hospital H
```

118 %

Results Messages

| | HospitalName |
|----|---------------------------------|
| 1 | Brooks, Wright and Olson |
| 2 | Bentley-Thomas |
| 3 | Brady LLC |
| 4 | Brown-Green |
| 5 | Lam, Rodriguez and Berger |
| 6 | White-Hahn |
| 7 | Martinez and Sons |
| 8 | Silva, Garcia and Hicks |
| 9 | Brown, Duncan and Hughes |
| 10 | Frye, Patton and Carter |
| 11 | Morris-Shepherd |
| 12 | Rodriguez, Barrett and Thompson |
| 13 | Gallagher and Sons |
| 14 | Hayes, Burke and Oconnell |
| 15 | Baker-Byrd |
| 16 | Andrews-Bush |
| 17 | Crawford Group |
| 18 | Jordan-Glover |
| 19 | Lynch-Hamilton |
| 20 | Johnson, Wagner and Fields |
| 21 | Rich, Hart and Edwards |
| 22 | Carter-Riley |
| 23 | Davidson PLC |
| 24 | Mccoy-Mahoney |
| 25 | Schwartz Group |
| 26 | Davis-Smith |
| 27 | Drake and Sons |

5. Order patients by age from oldest to youngest.

```
SELECT *
FROM Patient
ORDER BY Age DESC
```

118 %

Results Messages

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId |
|-----|------|------------------------|-----|--------|-----------|-------------------|------------|
| 815 | 8017 | Angela Lara | 80 | Female | AB- | Medicare | 504 |
| 816 | 8074 | Christian Gonzalez | 80 | Male | O+ | Aetna | 146 |
| 817 | 7716 | Terrence Edwards | 80 | Male | B- | Aetna | 203 |
| 818 | 7767 | John Garza | 80 | Female | AB+ | UnitedHealthcare | 254 |
| 819 | 7730 | Laurie Mitchell | 80 | Female | B- | Aetna | 217 |
| 820 | 7759 | Michael Pollard | 80 | Male | AB+ | Blue Cross | 246 |
| 821 | 7644 | Joshua Benjamin | 80 | Male | AB+ | Aetna | 131 |
| 822 | 7607 | Jermaine Thomas | 80 | Female | B+ | UnitedHealthcare | 94 |
| 823 | 7533 | Sally Shaw | 80 | Male | O- | Blue Cross | 20 |
| 824 | 7535 | Steven Bennett | 79 | Male | O- | Blue Cross | 22 |
| 825 | 7641 | Destiny Parks | 79 | Female | O- | Blue Cross | 128 |
| 826 | 7788 | Harry Thomas | 79 | Female | AB- | Medicare | 275 |
| 827 | 7655 | Andrea Williams | 79 | Male | AB+ | Aetna | 142 |
| 828 | 7995 | Julie Acevedo | 79 | Male | O+ | Cigna | 482 |
| 829 | 7985 | Jose Brown | 79 | Female | AB- | Medicare | 472 |
| 830 | 7950 | Bradley Cross | 79 | Male | AB- | UnitedHealthcare | 437 |
| 831 | 7952 | Megan Gibson DVM | 79 | Female | B+ | Blue Cross | 439 |
| 832 | 7942 | Mrs. Christine Rodr... | 79 | Female | A- | UnitedHealthcare | 429 |
| 833 | 7977 | Frederick Newman | 79 | Female | B- | Medicare | 464 |
| 834 | 7842 | Jonathan Nielsen | 79 | Female | A- | UnitedHealthcare | 329 |
| 835 | 7852 | Kathleen Murray | 79 | Female | O+ | Cigna | 339 |
| 836 | 7901 | Rose Rios | 79 | Male | B- | Blue Cross | 388 |
| 837 | 7906 | Michael Schmidt | 79 | Female | A- | Blue Cross | 393 |
| 838 | 7930 | Heather Turner | 79 | Female | AB+ | Blue Cross | 417 |
| 839 | 8323 | David Marquez | 79 | Female | O- | Medicare | 810 |
| 840 | 8308 | Michael Moore | 79 | Male | A+ | UnitedHealthcare | 795 |
| 841 | 8208 | Samantha Martinez | 79 | Female | O- | Cigna | 795 |

6. Calculate the average billing amount for all admissions.

```
--6.Calculate the average billing amount for all admissions.
```

```
SELECT pc.admissionType ,AVG(H.billingAmount) as 'Avaerage Billing amount'
FROM Patient p
JOIN Hospital H ON p.HospitalId = H.id
JOIN PatientCase PC ON pc.patientId= p.id
group by pc.admissionType
```

118 %

Results Messages

| | admissionType | Avaerage Billing amount |
|---|---------------|-------------------------|
| 1 | Emergency | 24732.164241 |
| 2 | Urgent | 25813.967266 |
| 3 | Elective | 25628.997223 |

7. Display patients admitted through 'Emergency'.

```
--7. Display patients admitted through 'Emergency'.
```

```
SELECT *
FROM Patient P
JOIN
PatientCase PC ON pc.patientId= p.id
WHERE PC.admissionType = 'Emergency'
```

```
SELECT * FROM PatientCase
```

8 %

Results Messages

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId | caselId | admissionType | MedicalCondition | Medication | TestResult | patientId |
|---|------|-------------------------|-----|--------|-----------|-------------------|------------|---------|---------------|------------------|-------------|--------------|-----------|
| | 7515 | Ruben Burns | 35 | Male | O+ | UnitedHealthcare | 2 | 1238 | Emergency | Asthma | Lipitor | Normal | 7515 |
| : | 7516 | Chad Byrd | 61 | Male | B- | Medicare | 3 | 1239 | Emergency | Obesity | Lipitor | Normal | 7516 |
| : | 7524 | Amy Roberts | 45 | Male | B- | Aetna | 11 | 1247 | Emergency | Cancer | Penicillin | Abnormal | 7524 |
| : | 7525 | Mrs. Caroline Farrell | 23 | Female | O- | Medicare | 12 | 1248 | Emergency | Hypertension | Paracetamol | Inconclusive | 7525 |
| : | 7528 | Michael Bradshaw | 65 | Female | AB+ | Cigna | 15 | 1251 | Emergency | Cancer | Ibuprofen | Inconclusive | 7528 |
| : | 7529 | Brian Dorsey | 32 | Female | O+ | Aetna | 16 | 1252 | Emergency | Arthritis | Aspirin | Inconclusive | 7529 |
| : | 7533 | Sally Shaw | 80 | Male | O- | Blue Cross | 20 | 1256 | Emergency | Arthritis | Ibuprofen | Inconclusive | 7533 |
| : | 7534 | William Johnson | 55 | Female | AB+ | Aetna | 21 | 1257 | Emergency | Arthritis | Penicillin | Normal | 7534 |
| : | 7536 | Haley Li | 51 | Male | B- | Medicare | 23 | 1259 | Emergency | Obesity | Lipitor | Abnormal | 7536 |
| 0 | 7541 | Francis Newman | 74 | Female | AB+ | Cigna | 28 | 1264 | Emergency | Hypertension | Lipitor | Abnormal | 7541 |
| 1 | 7543 | Shannon Fitzpatrick DVM | 35 | Female | O+ | UnitedHealthcare | 30 | 1266 | Emergency | Hypertension | Lipitor | Inconclusive | 7543 |
| 2 | 7544 | Teresa Gonzalez | 37 | Female | B- | Medicare | 31 | 1267 | Emergency | Arthritis | Lipitor | Abnormal | 7544 |
| 3 | 7545 | Rodney Maynard | 81 | Male | AB- | Blue Cross | 32 | 1268 | Emergency | Obesity | Lipitor | Normal | 7545 |
| 4 | 7548 | Linda Chavez | 33 | Male | A- | Cigna | 35 | 1271 | Emergency | Cancer | Penicillin | Abnormal | 7548 |
| 5 | 7549 | Jennifer Rodriguez | 83 | Female | AB- | Cigna | 36 | 1272 | Emergency | Asthma | Lipitor | Abnormal | 7549 |
| 6 | 7550 | Anna Adams | 70 | Female | A+ | Medicare | 37 | 1273 | Emergency | Obesity | Paracetamol | Abnormal | 7550 |
| 7 | 7553 | Michael Burns | 19 | Male | B- | Aetna | 40 | 1276 | Emergency | Cancer | Lipitor | Inconclusive | 7553 |

8. Count the number of cases handled by each doctor.

```
--8.Count the number of cases handled by each doctor.  
SELECT D.DoctorName , COUNT(P.PatientName) AS 'PATIENT NUMBER'  
FROM Patient P  
JOIN PatientCase PC ON pc.patientId= p.id  
JOIN Hospital H ON p.HospitalId = H.id  
JOIN doctor D ON h.doctorId= D.id  
GROUP BY D.DoctorName
```

118 %

Results Messages

| | DoctorName | PATIENT NUMBER |
|-----|-------------------|----------------|
| 115 | Brendan Gonza... | 1 |
| 116 | Sarah Anderson | 1 |
| 117 | Daniel Stephens | 1 |
| 118 | Maria Mcdaniel | 1 |
| 119 | Dale Mcgrath | 1 |
| 120 | Megan Mendoza | 2 |
| 121 | Melissa Clark | 2 |
| 122 | Alexis Williams | 1 |
| 123 | Daniel Duncan | 1 |
| 124 | Danielle Garcia | 1 |
| 125 | Jonathan Ramir... | 1 |
| 126 | Timothy Hanson | 1 |
| 127 | Michael Gibbs | 1 |
| 128 | Nathaniel White | 1 |
| 129 | Joseph Stevens | 2 |
| 130 | Sharon Harrell | 1 |
| 131 | Adam McBride | 1 |

9. Show the doctor name and the hospital they work in.

--9.Show the doctor name and the hospital they work in

```
SELECT D.DoctorName , H.HospitalName
FROM Hospital h
JOIN doctor D ON h.doctorId= D.id
```

118 %

Results Messages

| | DoctorName | HospitalName |
|----|--------------------|----------------------------|
| 4 | Brian Chandler | Garcia Ltd |
| 5 | Dustin Griffin | Jones, Brown and Murray |
| 6 | Robin Green | Boyd PLC |
| 7 | Patricia Bishop | Wheeler, Bryant and Johns |
| 8 | Brian Kennedy | Brown Inc |
| 9 | Kristin Dunn | Smith, Edwards and Obrien |
| 10 | Jessica Bailey | Brown-Golden |
| 11 | Anthony Roberts | Little-Spencer |
| 12 | William Miller | Rose Inc |
| 13 | Laura Roberts | Malone, Thompson and Mejia |
| 14 | James Carney | Richardson-Powell |
| 15 | Katherine Lowe | Castaneda-Hardy |
| 16 | Curtis Smith | Burch-White |
| 17 | Clayton Mcknight | Cunningham and Sons |
| 18 | Debra Meyers | Bell, Mcknight and Willis |
| 19 | Megan Sanders | Pugh-Rogers |
| 20 | Zachary Horton ... | Rush, Owens and Johnson |
| 21 | Kelly Thompson | Pearson LLC |
| 22 | Michael Chang | Schultz-Powers |
| 23 | Nicole Wood | Jordan Inc |
| 24 | Angela Kim | Lewis-Nelson |
| 25 | Jodi Holland | Vaughn PLC |
| 26 | Christina Flores | Mcknight-Mclean |
| 27 | Natalie Sullivan | Gilbert and Sons |
| 28 | Carolyn Baker ... | Hess-Lowe |
| 29 | Nicole McClain | Hawkins Ltd |
| 30 | Chloe Thomas | Miller-Grimes |
| 31 | Brian Watson | Sanders Ltd |
| 32 | Dr. Kyle Dickson | Nixon, Evans and Bradley |
| 33 | Michael Smith | Hernandez, Hunt and Clark |

10. List patients whose test results are 'Abnormal'.

```
SELECT *
FROM Patient p
JOIN PatientCase pc ON p.id= pc.caseId
WHERE pc.TestResult = 'abnormal'
```

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId | caselid | admissionType | MedicalCondition | Medication | TestResult | patientId |
|----|------|-------------------------|-----|--------|-----------|-------------------|------------|---------|---------------|------------------|-------------|------------|-----------|
| 1 | 7514 | Tiffany Ramirez | 81 | Female | O- | Medicare | 1 | 7514 | Emergency | Hypertension | Ibuprofen | Abnormal | 13791 |
| 2 | 7520 | Charles Horton | 82 | Male | AB+ | Cigna | 7 | 7520 | Elective | Diabetes | Ibuprofen | Abnormal | 13797 |
| 3 | 7521 | Patty Norman | 55 | Female | O- | Blue Cross | 8 | 7521 | Emergency | Cancer | Penicillin | Abnormal | 13798 |
| 4 | 7523 | Sharon Perez | 39 | Female | O- | Blue Cross | 10 | 7523 | Emergency | Asthma | Aspirin | Abnormal | 13800 |
| 5 | 7526 | Christina Williams | 85 | Female | A+ | Aetna | 13 | 7526 | Emergency | Arthritis | Lipitor | Abnormal | 13803 |
| 6 | 7527 | William Page | 72 | Female | A+ | Cigna | 14 | 7527 | Urgent | Asthma | Paracetamol | Abnormal | 13804 |
| 7 | 7529 | Brian Dorsey | 32 | Female | O+ | Aetna | 16 | 7529 | Emergency | Arthritis | Lipitor | Abnormal | 13806 |
| 8 | 7532 | Desiree Williams MD | 66 | Male | O+ | UnitedHealthcare | 19 | 7532 | Elective | Hypertension | Paracetamol | Abnormal | 13809 |
| 9 | 7535 | Steven Bennett | 79 | Male | O- | Blue Cross | 22 | 7535 | Urgent | Obesity | Aspirin | Abnormal | 13812 |
| 10 | 7536 | Haley Li | 51 | Male | B- | Medicare | 23 | 7536 | Urgent | Diabetes | Ibuprofen | Abnormal | 13813 |
| 11 | 7538 | Beverly Miller | 54 | Male | A- | Cigna | 25 | 7538 | Elective | Hypertension | Ibuprofen | Abnormal | 13815 |
| 12 | 7542 | Ronnie Hughes | 56 | Female | A- | Aetna | 29 | 7542 | Elective | Asthma | Lipitor | Abnormal | 13819 |
| 13 | 7543 | Shannon Fitzpatrick... | 35 | Female | O+ | UnitedHealthcare | 30 | 7543 | Elective | Diabetes | Penicillin | Abnormal | 13820 |
| 14 | 7547 | Rebecca Parsons | 51 | Male | B- | Blue Cross | 34 | 7547 | Emergency | Hypertension | Lipitor | Abnormal | 13824 |
| 15 | 7548 | Linda Chavez | 33 | Male | A- | Cigna | 35 | 7548 | Urgent | Arthritis | Ibuprofen | Abnormal | 13825 |
| 16 | 7554 | Miguel Baker | 23 | Male | O- | UnitedHealthcare | 41 | 7554 | Emergency | Obesity | Ibuprofen | Abnormal | 13831 |
| 17 | 7555 | Mr. Christopher Mill... | 81 | Male | AB+ | Cigna | 42 | 7555 | Urgent | Asthma | Lipitor | Abnormal | 13832 |
| 18 | 7563 | Justin Kaufman | 82 | Female | AB- | Cigna | 50 | 7563 | Urgent | Arthritis | Ibuprofen | Abnormal | 13840 |
| 19 | 7567 | Rachael Davidson | 57 | Female | O- | Cigna | 54 | 7567 | Emergency | Obesity | Lipitor | Abnormal | 13844 |
| 20 | 7571 | Nicole Williams | 82 | Male | O- | Cigna | 58 | 7571 | Urgent | Obesity | Ibuprofen | Abnormal | 13848 |
| 21 | 7577 | Amanda Stein DVM | 56 | Female | O+ | Aetna | 64 | 7577 | Urgent | Hypertension | Lipitor | Abnormal | 13854 |
| 22 | 7579 | Lisa Gonzalez | 42 | Male | A+ | Medicare | 66 | 7579 | Elective | Diabetes | Ibuprofen | Abnormal | 13856 |
| 23 | 7587 | Anna Phillips | 57 | Male | O- | Medicare | 74 | 7587 | Emergency | Hypertension | Ibuprofen | Abnormal | 13864 |
| 24 | 7592 | David Sanchez | 34 | Male | O+ | Blue Cross | 79 | 7592 | Urgent | Hypertension | Penicillin | Abnormal | 13869 |
| 25 | 7593 | Teresa Marks | 51 | Female | O+ | UnitedHealthcare | 80 | 7593 | Emergency | Asthma | Aspirin | Abnormal | 13870 |
| 26 | 7595 | Douglas Crawford | 34 | Male | AB+ | Blue Cross | 82 | 7595 | Urgent | Arthritis | Aspirin | Abnormal | 13872 |
| 27 | 7598 | Travis Walker | 70 | Female | A- | Medicare | 85 | 7598 | Emergency | Cancer | Penicillin | Abnormal | 13875 |

11. Display all patients treated in a hospital named 'Cairo Hospital' using JOIN.

```
--11. Display all patients treated in a hospital named 'Cairo Hospital' using JOIN.
SELECT *
FROM Patient p
JOIN Hospital H ON H.id= P.HospitalId
WHERE H.HospitalName = 'Brown Inc'
```

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId | id | HospitalName | DateOfAddmission | DateOfDischarge | RoomNum | billingAmount | doctorId |
|---|-------|-------------------|-----|--------|-----------|-------------------|------------|----|--------------|------------------|-----------------|---------|---------------|----------|
| 1 | 7521 | Patty Norman | 55 | Female | O- | Blue Cross | 8 | 8 | Brown Inc | 2019-05-16 | 2019-02-06 | 384 | 13547 | 1195 |
| 2 | 12180 | Judy Anderson | 45 | Female | AB- | Aetna | 8 | 8 | Brown Inc | 2019-05-16 | 2019-02-06 | 384 | 13547 | 1195 |
| 3 | 13669 | Jill Knight | 58 | Female | B- | Blue Cross | 8 | 8 | Brown Inc | 2019-05-16 | 2019-02-06 | 384 | 13547 | 1195 |
| 4 | 17292 | Christina Simmons | 28 | Female | A+ | Aetna | 8 | 8 | Brown Inc | 2019-05-16 | 2019-02-06 | 384 | 13547 | 1195 |

12. Calculate the total billing amount per hospital.


```
--12. Calculate the total billing amount per hospital.
```

```
SELECT HospitalName, SUM(billingAmount) AS 'TOTAL BILLING'
FROM Hospital
GROUP BY HospitalName
```

8 %

Results Messages

| | HospitalName | TOTAL BILLING |
|---|---------------------------------|---------------|
| | Brooks, Wright and Olson | 19319 |
| | Bentley-Thomas | 16308 |
| | Brady LLC | 11424 |
| | Brown-Green | 2635 |
| | Lam, Rodriguez and Berger | 16457 |
| | White-Hahn | 31477 |
| | Martinez and Sons | 24706 |
| | Silva, Garcia and Hicks | 24260 |
| | Brown, Duncan and Hughes | 38453 |
| 0 | Frye, Patton and Carter | 42385 |
| 1 | Morris-Shepherd | 49318 |
| 2 | Rodriguez, Barrett and Thompson | 41334 |
| 3 | Gallagher and Sons | 35704 |
| 4 | Hayes, Burke and Oconnell | 21566 |
| 5 | Baker-Byrd | 15824 |
| 6 | Andrews-Bush | 19341 |
| 7 | Crawford Group | 25782 |
| 8 | Jordan-Glover | 36745 |
| 9 | Lynch-Hamilton | 9530 |
| 0 | Johnson, Wagner and Fields | 35017 |
| 1 | Rich, Hart and Edwards | 48961 |
| 2 | Carter-Pilev | 8242 |

13. List the patients who stayed more than 5 days in the hospital.

```
--13. List the patients who stayed more than 5 days in the hospital.
```

```
SELECT *
FROM Patient P
JOIN Hospital H
ON P.HospitalId = H.id
WHERE (
DATEDIFF(DAY, DAY(H.DateOfAdmission), DAY(H.DateOfDischarge)) > 5
)
```

118 %

Results Messages

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId | id | HospitalName | DateOfAdmission | DateOfDischarge | RoomNum | billingAmount | doctorId |
|----|------|-------------------------|-----|--------|-----------|-------------------|------------|----|-----------------------------|-----------------|-----------------|---------|---------------|----------|
| 1 | 7515 | Ruben Burns | 35 | Male | O+ | UnitedHealthcare | 2 | 2 | Burke, Griffin and Cooper | 2023-01-06 | 2023-06-15 | 404 | 47304 | 2598 |
| 2 | 7525 | Mrs. Caroline Farrell | 23 | Female | O- | Medicare | 12 | 12 | Rose Inc | 2019-09-06 | 2019-06-26 | 126 | 6186 | 9332 |
| 3 | 7528 | Michael Bradshaw | 65 | Female | AB+ | Cigna | 15 | 15 | Castaneda-Hardy | 2021-05-06 | 2021-06-25 | 120 | 10343 | 4950 |
| 4 | 7529 | Brian Dorsey | 32 | Female | O+ | Aetna | 16 | 16 | Burch-White | 2021-07-08 | 2021-08-14 | 492 | 27175 | 2040 |
| 5 | 7531 | Teresa Caldwell | 23 | Male | A+ | Medicare | 18 | 18 | Bell, Mcknight and Willis | 2022-08-03 | 2022-03-16 | 475 | 45214 | 2468 |
| 6 | 7532 | Desiree Williams MD | 66 | Male | O+ | UnitedHealthcare | 19 | 19 | Pugh-Rogers | 2022-06-19 | 2022-06-29 | 125 | 4263 | 6271 |
| 7 | 7535 | Steven Bennett | 79 | Male | O- | Blue Cross | 22 | 22 | Schultz-Powers | 2022-12-12 | 2022-12-26 | 364 | 42611 | 6410 |
| 8 | 7537 | Angela Brown | 33 | Female | B- | UnitedHealthcare | 24 | 24 | Lewis-Nelson | 2019-10-01 | 2019-01-31 | 120 | 22331 | 572 |
| 9 | 7540 | Kimberly Mason | 70 | Female | B- | Aetna | 27 | 27 | Gilbert and Sons | 2021-12-07 | 2021-07-29 | 379 | 35834 | 6913 |
| 10 | 7543 | Shannon Fitzpatrick DVM | 35 | Female | O+ | UnitedHealthcare | 30 | 30 | Miller-Grimes | 2022-02-12 | 2022-12-18 | 162 | 18393 | 1631 |
| 11 | 7544 | Teresa Gonzalez | 37 | Female | B- | Medicare | 31 | 31 | Sanders Ltd | 2021-09-11 | 2021-11-28 | 456 | 22356 | 1230 |
| 12 | 7545 | Rodney Maynard | 81 | Male | AB- | Blue Cross | 32 | 32 | Nixon, Evans and Bradley | 2023-09-07 | 2023-07-17 | 197 | 21001 | 2732 |
| 13 | 7548 | Linda Chavez | 33 | Male | A- | Cigna | 35 | 35 | Winters and Sons | 2019-01-12 | 2019-12-18 | 137 | 24609 | 8823 |
| 14 | 7549 | Jennifer Rodriguez | 83 | Female | AB- | Cigna | 36 | 36 | Duke Group | 2019-12-11 | 2019-11-24 | 192 | 5099 | 7329 |
| 15 | 7550 | Anna Adams | 70 | Female | A+ | Medicare | 37 | 37 | Snow Group | 2022-06-09 | 2022-09-18 | 258 | 1000 | 7940 |
| 16 | 7558 | Lauren Barton | 34 | Male | O+ | Medicare | 45 | 45 | Gallagher-Horton | 2019-06-06 | 2019-06-30 | 119 | 16036 | 3002 |
| 17 | 7559 | Christina Hernandez | 84 | Female | O+ | Aetna | 46 | 46 | Harris and Sons | 2019-10-13 | 2019-10-29 | 388 | 10804 | 1917 |
| 18 | 7568 | Lori Owens | 19 | Male | A+ | Blue Cross | 55 | 55 | Diaz-Ferguson | 2021-04-07 | 2021-07-29 | 303 | 20080 | 89 |
| 19 | 7569 | Frank Reid | 61 | Female | AB+ | Blue Cross | 56 | 56 | Nichols, Stone and Mills | 2019-04-11 | 2019-11-19 | 317 | 1888 | 4230 |
| 20 | 7572 | Michael Miller | 61 | Male | A+ | Blue Cross | 59 | 59 | Lambert and Sons | 2023-06-04 | 2023-04-22 | 438 | 14691 | 6969 |
| 21 | 7578 | Paul Graham | 60 | Female | A+ | Medicare | 65 | 65 | Merritt Inc | 2020-08-08 | 2020-08-29 | 301 | 44423 | 6774 |
| 22 | 7579 | Lisa Gonzalez | 42 | Male | A+ | Medicare | 66 | 66 | Lee, Rasmussen and Anderson | 2023-09-07 | 2023-07-30 | 223 | 22749 | 3308 |

14. Show all medications used per admission using JOIN.

```
)  
--14. Show all medications used per admission using JOIN.  
SELECT Medication ,admissionType  
FROM PatientCase  
FOR JSON AUTO;
```

118 %

Results Messages

JSON_F52E2B61-18A1-11d1-B105-00805F49916B

| | |
|---|--|
| 1 | [{"Medication": "Aspirin", "admissionType": "Elective"}] |
|---|--|

15. Count the number of patients per medical condition.

```
SELECT PC.MedicalCondition , COUNT(P.PatientName) AS 'NUM OF ALL PATIENT'  
FROM Patient p  
JOIN PatientCase pc  
ON p.id =PC.patientId  
GROUP BY PC.MedicalCondition
```

118 %

Results Messages

| | MedicalCondition | NUM OF ALL PATIENT |
|---|------------------|--------------------|
| 1 | Diabetes | 1623 |
| 2 | Cancer | 1703 |
| 3 | Arthritis | 1650 |
| 4 | Asthma | 1708 |
| 5 | Hypertension | 1688 |
| 6 | Obesity | 1628 |

16. Show each doctor and how many patients they treated.
SAME AS 8

17. List each hospital and the number of doctors working there.

--17. List each hospital and the number of doctors working there.

```
SELECT H.HospitalName ,COUNT(D.DoctorName) AS 'NUM OF DOCS'
FROM Hospital h
JOIN
doctor d
ON H.id = d.id
GROUP BY H.HospitalName
```

118 %

Results Messages

| | HospitalName | NUM OF DOCS |
|----|---------------------------------|-------------|
| 22 | Carter-Riley | 1 |
| 23 | Davidson PLC | 1 |
| 24 | Mccoy-Mahoney | 1 |
| 25 | Schwartz Group | 1 |
| 26 | Davis-Smith | 2 |
| 27 | Drake and Sons | 3 |
| 28 | Jones, Flores and Johnson | 1 |
| 29 | Hawkins LLC | 1 |
| 30 | Ryan-Wood | 1 |
| 31 | Carson, Hernandez and Gallagher | 1 |
| 32 | Ferguson-Miller | 1 |
| 33 | Curry, Lee and Barnes | 1 |
| 34 | Farley, Kelly and Davis | 1 |
| 35 | Rivera-Carter | 1 |
| 36 | Simmons, Weber and White | 1 |
| 37 | Horn Group | 1 |
| 38 | Kim-Fox | 1 |
| 39 | Villa-Meyer | 1 |
| 40 | Morgan LLC | 2 |
| 41 | Morris-Sutton | 1 |
| 42 | Saunders, Barker and Brown | 1 |
| 43 | Morgan-Brown | 1 |

18. Display patients discharged before '2024-01-01'.

--18. Display patients discharged before '2024-01-01'

```
SELECT *
FROM Patient p
JOIN Hospital h
ON
H.id= P.HospitalId
WHERE
H.DateOfDischarge = '2023-01-01'
```

118 %

Results Messages

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId | id | HospitalName | DateOfAdmission | DateOfDischarge | RoomNum | billingAmount | doctorId |
|---|-------|--------------|-----|--------|-----------|-------------------|------------|------|------------------------------|-----------------|-----------------|---------|---------------|----------|
| 1 | 9284 | Taylor Smith | 84 | Male | B+ | Aetna | 1771 | 1771 | Ford, Whitney and Brown | 2022-12-30 | 2023-01-01 | 426 | 18489 | 1906 |
| 2 | 9390 | Mary Rojas | 65 | Female | A- | Cigna | 1877 | 1877 | Castillo, Perez and Brown | 2022-12-29 | 2023-01-01 | 443 | 14624 | 7916 |
| 3 | 9812 | Lisa Curry | 40 | Female | O+ | Medicare | 2299 | 2299 | Costa, Nguyen and Hoover | 2022-12-23 | 2023-01-01 | 454 | 7008 | 2089 |
| 4 | 13807 | Vicki Carter | 67 | Male | B+ | Blue Cross | 6294 | 6294 | Stewart-Rogers | 2022-04-12 | 2023-01-01 | 459 | 18257 | 8135 |
| 5 | 15819 | Tara Miller | 23 | Female | O+ | Blue Cross | 8306 | 8306 | Williamson, Bradley and Hill | 2022-02-12 | 2023-01-01 | 117 | 5051 | 5189 |

19. Show patients with billing amounts above the average (use

--19.Show patients with billing amounts above the average (usesubquery)

```
SELECT p.PatientName, H.billingAmount
FROM Hospital H
JOIN Patient P ON P.HospitalId = H.id
WHERE H.billingAmount > (
    SELECT AVG(TotalBilling)
    FROM (
        SELECT SUM(billingAmount) AS TotalBilling
        FROM Hospital
        GROUP BY id
    ) AS HospitalTotals
```

118 %

Results Messages

| | PatientName | billingAmount |
|----|-------------------|---------------|
| 1 | Tiffany Ramirez | 37491 |
| 2 | Ruben Burns | 47304 |
| 3 | Chad Byrd | 36875 |
| 4 | Charles Horton | 39593 |
| 5 | Amy Roberts | 40325 |
| 6 | Brian Dorsey | 27175 |
| 7 | Teresa Caldwell | 45214 |
| 8 | William Johnson | 32264 |
| 9 | Steven Bennett | 42611 |
| 10 | Beverly Miller | 41320 |
| 11 | Daniel Dickson | 37767 |
| 12 | Kimberly Mason | 35834 |
| 13 | Rebecca Parsons | 39031 |
| 14 | Miguel Baker | 39329 |
| 15 | Kyle Byrd | 38873 |
| 16 | Jasmine Singleton | 34133 |
| 17 | John Griffin | 25949 |
| 18 | Justin Kaufman | 46462 |
| 19 | Olivia Ayala | 49577 |
| 20 | Rachael Davidson | 41295 |

20. List patients who were given the medication 'Aspirin'.

--20. List patients who were given the medication 'Aspirin'.
select *
from Patient P join PatientCase PC on PC.patientId = p.id
where pc.Medication = 'Aspirin'

118 %

Results Messages

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId | caseld | admissionType | MedicalCondition | Medication | TestResult | patientId |
|----|------|---------------------|-----|--------|-----------|-------------------|------------|--------|---------------|------------------|------------|--------------|-----------|
| 1 | 7514 | Tiffany Ramirez | 81 | Female | O- | Medicare | 1 | 1237 | Elective | Diabetes | Aspirin | Inconclusive | 7514 |
| 2 | 7519 | Patrick Parker | 41 | Male | AB+ | Aetna | 6 | 1242 | Urgent | Arthritis | Aspirin | Abnormal | 7519 |
| 3 | 7521 | Patty Norman | 55 | Female | O- | Blue Cross | 8 | 1244 | Elective | Arthritis | Aspirin | Normal | 7521 |
| 4 | 7522 | Ryan Hayes | 33 | Male | A+ | Aetna | 9 | 1245 | Elective | Diabetes | Aspirin | Abnormal | 7522 |
| 5 | 7523 | Sharon Perez | 39 | Female | O- | Blue Cross | 10 | 1246 | Urgent | Asthma | Aspirin | Normal | 7523 |
| 6 | 7526 | Christina Williams | 85 | Female | A+ | Aetna | 13 | 1249 | Elective | Diabetes | Aspirin | Inconclusive | 7526 |
| 7 | 7527 | William Page | 72 | Female | A+ | Cigna | 14 | 1250 | Elective | Diabetes | Aspirin | Normal | 7527 |
| 8 | 7529 | Brian Dorsey | 32 | Female | O+ | Aetna | 16 | 1252 | Emergency | Arthritis | Aspirin | Inconclusive | 7529 |
| 9 | 7530 | Olivia Gonzalez | 64 | Male | AB- | Aetna | 17 | 1253 | Elective | Diabetes | Aspirin | Inconclusive | 7530 |
| 10 | 7532 | Desiree Williams MD | 66 | Male | O+ | UnitedHealthcare | 19 | 1255 | Elective | Obesity | Aspirin | Inconclusive | 7532 |
| 11 | 7537 | Angela Brown | 33 | Female | B- | UnitedHealthcare | 24 | 1260 | Urgent | Diabetes | Aspirin | Abnormal | 7537 |
| 12 | 7559 | Christina Hernandez | 84 | Female | O+ | Aetna | 46 | 1282 | Emergency | Hypertension | Aspirin | Inconclusive | 7559 |
| 13 | 7567 | Rachael Davidson | 57 | Female | O- | Cigna | 54 | 1290 | Emergency | Cancer | Aspirin | Normal | 7567 |
| 14 | 7571 | Nicole Williams | 82 | Male | O- | Cigna | 58 | 1294 | Urgent | Hypertension | Aspirin | Normal | 7571 |
| 15 | 7575 | Mary Brown | 31 | Male | A+ | Aetna | 62 | 1298 | Urgent | Cancer | Aspirin | Inconclusive | 7575 |
| 16 | 7576 | Evan Martinez | 42 | Female | B+ | Medicare | 63 | 1299 | Emergency | Obesity | Aspirin | Normal | 7576 |
| 17 | 7578 | Paul Graham | 60 | Female | A+ | Medicare | 65 | 1301 | Elective | Hypertension | Aspirin | Normal | 7578 |
| 18 | 7585 | Ryan Richmond | 84 | Male | A- | Cigna | 72 | 1308 | Emergency | Cancer | Aspirin | Abnormal | 7585 |
| 19 | 7589 | Miguel Fialdo | 56 | Female | B- | Cigna | 76 | 1312 | Elective | Diabetes | Aspirin | Normal | 7589 |

21. Show each patient's name, their doctor's name, and hospital name. If the medical condition is NULL, show 'No Diagnosis' (use COALESCE with JOINS across patients, doctors, and hospitals).

```

SELECT p.PatientName, D.DoctorName ,H.HospitalName, Medication
FROM Patient P
JOIN PatientCase PC ON pc.patientId= p.id
JOIN Hospital H ON p.HospitalId = H.id
JOIN doctor D ON h.doctorId= D.id

```

```

SELECT * FROM PatientCase

```

Results Messages

| PatientName | DoctorName | HospitalName | Medication |
|-----------------------|-----------------|---------------------------|-------------|
| Tiffany Ramirez | Patrick Parker | Wallace-Hamilton | Aspirin |
| Ruben Burns | Diane Jackson | Burke, Griffin and Cooper | Lipitor |
| Chad Byrd | Paul Baker | Walton LLC | Lipitor |
| Antonio Frederick | Brian Chandler | Garcia Ltd | Penicillin |
| Eduardo Alexander | Brian Chandler | Garcia Ltd | Paracetamol |
| Chris Roth | Brian Chandler | Garcia Ltd | Paracetamol |
| Mrs. Brandy Flowers | Dustin Griffin | Jones, Brown and Murray | Paracetamol |
| Patrick Parker | Robin Green | Boyd PLC | Aspirin |
| Rachel Cox | Robin Green | Boyd PLC | Penicillin |
| Charles Horton | Patricia Bishop | Wheeler, Bryant and Johns | Lipitor |
| Patty Norman | Brian Kennedy | Brown Inc | Aspirin |
| Judy Anderson | Brian Kennedy | Brown Inc | Ibuprofen |
| Jill Knight | Brian Kennedy | Brown Inc | Paracetamol |
| Christina Simmons | Brian Kennedy | Brown Inc | Aspirin |
| Ryan Hayes | Kristin Dunn | Smith, Edwards and Obrien | Aspirin |
| Sharon Perez | Jessica Bailey | Brown-Golden | Aspirin |
| Amy Roberts | Anthony Roberts | Little-Spencer | Penicillin |
| Mrs. Caroline Farrell | William Miller | Rose Inc | Paracetamol |
| Casey Foster | William Miller | Rose Inc | Lipitor |

22. List patients who were admitted more than once, showing their name and number of admissions (use GROUP BY and HAVING COUNT(*) > 1).

--22. List patients who were admitted more than once, showing their name and number of admissions (use GROUP BY and HAVING COUNT

```
SELECT p.PatientName, COUNT(H.DateOfAdmission) AS 'NUM OF Admission'
FROM Patient P
JOIN PatientCase PC ON pc.patientId= p.id
JOIN Hospital H ON p.HospitalId = H.id
JOIN doctor D ON h.doctorId= D.id
GROUP BY p.PatientName
HAVING COUNT(H.DateOfAdmission)>1
```

118 %

Results Messages

| | PatientName | NUM OF Admission |
|----|-------------------|------------------|
| 1 | Timothy Hernandez | 2 |
| 2 | Travis Walker | 2 |
| 3 | Michael Lewis | 3 |
| 4 | Nicole Evans | 2 |
| 5 | Daniel Alexander | 2 |
| 6 | Matthew Norris | 2 |
| 7 | Amy Brown | 3 |
| 8 | William Smith | 2 |
| 9 | Ryan Smith | 2 |
| 10 | Joshua Moore | 2 |
| 11 | Joseph Rodriguez | 2 |
| 12 | John Walker | 2 |
| 13 | Kyle Byrd | 2 |
| 14 | Lisa Jones | 3 |
| 15 | Stephanie Lee | 2 |
| 16 | Michael Hamilton | 2 |
| 17 | Michael Robbins | 2 |
| 18 | Cynthia Welch | 2 |
| 19 | Kathleen Lee | 2 |

23. Count the number of patients per admission_type, only showing those with more than 3 and where admission_type is not NULL.

--23. Count the number of patients per admission_typ

```
SELECT COUNT(PatientName) ,admissionType
FROM Patient P
JOIN PatientCase PC ON pc.patientId= p.id
JOIN Hospital H ON p.HospitalId = H.id
JOIN doctor D ON h.doctorId= D.id
GROUP BY admissionType
HAVING COUNT(PatientName)>3
```

118 %

Results Messages

| | (No column name) | admissionType |
|---|------------------|---------------|
| 1 | 3367 | Emergency |
| 2 | 3391 | Urgent |
| 3 | 3242 | Elective |

24. List patients with more than one distinct medical condition using JOINS across patients, admissions, and medical conditions.

```
--2424. List patients with more than one distinct medical condition using JOINS across
SELECT count(distinct MedicalCondition ),p.PatientName
FROM Patient P
JOIN PatientCase PC ON pc.patientId= p.id
JOIN Hospital H ON p.HospitalId = H.id
JOIN doctor D ON h.doctorId= D.id
group by p.PatientName
having count(MedicalCondition) >1
```

.8 %

Results Messages

| | (No column name) | PatientName |
|----|------------------|------------------|
| | 2 | Aaron Jones |
| ! | 2 | Aaron Miller |
| ! | 2 | Aaron Patel |
| ! | 2 | Adam Callahan |
| ! | 2 | Alexander Harris |
| ! | 2 | Alexander Turner |
| ' | 1 | Alicia Howard |
| ! | 2 | Allison Hill |
| ! | 2 | Allison Wilson |
| ! | 2 | Amanda Bailey |
| 1 | 3 | Amanda Daniels |
| 2 | 2 | Amanda Edwards |
| 3 | 2 | Amanda Hall |
| 4 | 3 | Amanda Lee |
| 5 | 1 | Amanda Richard |
| 6 | 2 | Amanda Thompson |
| 7 | 2 | Amanda Williams |
| 8 | 3 | Amy Brown |
| 9 | 2 | Amy James |
| !0 | 2 | Amy Thompson |

25. Show hospitals where the total billing is more than 50,000 EGP and display the total billing amount (use GROUP BY + SUM).

25. Show hospitals where the total billing is more than 50,000 EGP and display the total billing amount (use GROUP BY)

```

SELECT p.PatientName, billingAmount, h.HospitalName
FROM Patient P
JOIN Hospital H ON p.HospitalId = H.id
where (billingAmount > 40000)

```

| PatientName | billingAmount | HospitalName |
|-------------------|---------------|-----------------------------|
| Ruben Burns | 47304 | Burke, Griffin and Cooper |
| Amy Roberts | 40325 | Little-Spencer |
| Teresa Caldwell | 45214 | Bell, McKnight and Willis |
| Steven Bennett | 42611 | Schultz-Powers |
| Beverly Miller | 41320 | Vaughn PLC |
| Justin Kaufman | 46462 | Rodriguez-Robertson |
| Olivia Ayala | 49577 | Cook-Wright |
| Rachael Davidson | 41295 | Moyer-Vasquez |
| Cynthia Stanton | 44935 | Gray, Andersen and Williams |
| Kenneth Lopez | 47508 | Wood, Howard and Reed |
| Paul Graham | 44423 | Merritt Inc |
| Francisco Ritter | 43548 | Lewis-Boone |
| Tyler Rosario | 42685 | Diaz-Smith |
| Anthony Fisher | 46145 | Jackson-Le |
| Travis Walker | 44047 | Ramirez, Graham and Wright |
| Paul Greer | 48379 | Robertson PLC |
| Brian Robinson | 40341 | Flores Inc |
| Kurt Sloan | 48995 | Hancock, Bryant and Andrews |
| Anthony Armstrong | 48379 | Robertson PLC |
| William Jacobson | 48000 | Bell, Nunez and Davis |

26. Using a CTE, show patients over age 40 who were admitted as 'Urgent', along with their doctor and hospital name.

```

WITH AgeTable AS (
    SELECT
        p.PatientName,
        p.Age,
        pc.AdmissionType,
        pc.Medication,
        h.HospitalName,
        h.BillingAmount
    FROM Patient p
    JOIN PatientCase pc ON p.id = pc.patientId
    JOIN Hospital h ON p.HospitalId = h.id
    WHERE p.Age = 40 AND pc.AdmissionType = 'Urgent'
)
SELECT *
FROM AgeTable;

```

| Results Messages | | | | | | |
|------------------|--------------------|-----|---------------|-------------|----------------------------|---------------|
| | PatientName | Age | AdmissionType | Medication | HospitalName | BillingAmount |
| | James Perez | 40 | Urgent | Ibuprofen | Cummings-Walls | 33971 |
| | Dr. Joseph Roberts | 40 | Urgent | Ibuprofen | Spears-Payne | 16279 |
| | Joel Young | 40 | Urgent | Lipitor | Kaufman LLC | 1539 |
| | Jay Doyle | 40 | Urgent | Penicillin | Dawson Group | 8228 |
| | Rebecca Gilbert | 40 | Urgent | Ibuprofen | Christian, Moore and Wolf | 29093 |
| | Bruce Hernandez | 40 | Urgent | Paracetamol | Reyes-King | 9127 |
| | Lori Holder | 40 | Urgent | Aspirin | Ward, Marsh and Clark | 18077 |
| | Holly Oliver | 40 | Urgent | Penicillin | Bernard Group | 26384 |
| | Sue Peters | 40 | Urgent | Lipitor | Lee and Sons | 36922 |
| 0 | Lauren Pena | 40 | Urgent | Penicillin | Anderson LLC | 26790 |
| 1 | Juan Pope | 40 | Urgent | Ibuprofen | Clark PLC | 37893 |
| 2 | Mary Tran | 40 | Urgent | Paracetamol | Rollins-Hall | 47106 |
| 3 | Danny Allison | 40 | Urgent | Ibuprofen | Walter, George and Mack | 32142 |
| 4 | Jeremy Nelson | 40 | Urgent | Ibuprofen | Cline Ltd | 11333 |
| 5 | Steven Ramirez | 40 | Urgent | Aspirin | Arnold-Williams | 23913 |
| 6 | Catherine Eaton | 40 | Urgent | Ibuprofen | Clark, Holland and Garcia | 37998 |
| 7 | Sarah Malone | 40 | Urgent | Paracetamol | Briggs, Garcia and Collins | 44321 |
| 8 | Holly Silva | 40 | Urgent | Penicillin | Stephens PLC | 33281 |
| 9 | Debra Carter | 40 | Urgent | Paracetamol | Vaughan-Dawson | 29786 |
| 0 | Dr. Christian Lee | 40 | Urgent | Penicillin | Dunn-Snyder | 32570 |

27. Use a subquery to find all patients treated by the same doctor who treated a patient named 'Ahmed'.

```

select *
from Patient p
  JOIN PatientCase pc ON p.id = pc.patientId
  JOIN Hospital h ON p.HospitalId = h.id

  JOIN doctor D ON h.doctorId= d.id
where d.DoctorName = (
select top 1 d.DoctorName
from doctor
where
d.id = h.doctorId and
h.id = p.HospitalId and
p.PatientName = 'Megan Alexander'
)

```

118 %

Results

Messages

| | id | PatientName | Age | Gender | bloodType | InsuranceProvider | HospitalId | caseId | admissionType | MedicalCondition | Medication | TestResult | patientId | id | HospitalName | DateOfAdmission | DateOfDischar |
|---|-------|-----------------|-----|--------|-----------|-------------------|------------|--------|---------------|------------------|------------|------------|-----------|------|-------------------------|-----------------|---------------|
| 1 | 16080 | Megan Alexander | 33 | Male | AB+ | Cigna | 8567 | 9803 | Emergency | Asthma | Lipitor | Abnormal | 16080 | 8567 | Chang, Sutton and Mejia | 2022-03-10 | 2022-10-14 |

28. Show all admissions at 'Alex Medical Center' with the medication names and quantities using joins across admissions, hospitals, and medications.

```

SELECT
    pc.Medication,
    COUNT(*) AS Quantity
FROM Patient p
JOIN PatientCase pc ON pc.patientId = p.id
JOIN Hospital h ON p.HospitalId = h.id
WHERE h.HospitalName = 'Smith, Edwards and Obrien'
GROUP BY pc.Medication;

```

118 %

| Results | | |
|---------|------------|----------|
| | Medication | Quantity |
| 1 | Aspirin | 1 |

29. List patients who were discharged 10 or more days after admission (use DATEDIFF or date arithmetic).

```

SELECT
    p.PatientName,
    pc.admissionType,
    h.DateOfDischarge,
    DATEDIFF(DAY, h.DateOfAdmission, h.DateOfDischarge) AS StayDuration
FROM Patient p
JOIN PatientCase pc ON p.id = pc.patientId
JOIN Hospital h ON p.HospitalId = h.id
WHERE DATEDIFF(DAY, h.DateOfAdmission, h.DateOfDischarge) >= 10;

```

18 %

Results Messages

| | PatientName | admissionType | DateOfDischarge | StayDuration |
|----|-------------------------|---------------|-----------------|--------------|
| 1 | Tiffany Ramirez | Elective | 2022-12-01 | 14 |
| 2 | Ruben Burns | Emergency | 2023-06-15 | 160 |
| 3 | Antonio Frederick | Urgent | 2020-03-05 | 29 |
| 4 | Charles Horton | Urgent | 2021-04-15 | 24 |
| 5 | Amy Roberts | Emergency | 2021-11-05 | 206 |
| 6 | Christina Williams | Elective | 2021-12-14 | 15 |
| 7 | William Page | Elective | 2021-08-14 | 16 |
| 8 | Michael Bradshaw | Emergency | 2021-06-25 | 50 |
| 9 | Brian Dorsey | Emergency | 2021-08-14 | 37 |
| 10 | Desiree Williams MD | Elective | 2022-06-29 | 10 |
| 11 | William Johnson | Emergency | 2023-03-27 | 30 |
| 12 | Steven Bennett | Urgent | 2022-12-26 | 14 |
| 13 | Daniel Dickson | Urgent | 2021-06-23 | 27 |
| 14 | Francis Newman | Emergency | 2021-08-06 | 73 |
| 15 | Ronnie Hughes | Elective | 2019-11-06 | 176 |
| 16 | Shannon Fitzpatrick DVM | Emergency | 2022-12-18 | 300 |

30. Show patients admitted to rooms between 100 and 200, treated by 'Dr. Mona', and include a column that displays 'Senior' if the patient is older than 50, else 'Adult' (use CASE, JOIN, and filtering).

```
SELECT
    p.PatientName,
    p.Age,
    h.RoomNum,
    d.DoctorName,
    CASE
        WHEN p.Age > 50 THEN 'Senior'
        ELSE 'Adult'
    END AS AgeGroup
FROM Patient p
JOIN PatientCase pc ON p.id = pc.patientId
JOIN Hospital h ON p.HospitalId = h.id
JOIN Doctor d ON h.doctorId = d.id
WHERE h.RoomNum BETWEEN 100 AND 200
      AND d.DoctorName = 'Dr. Mona';
```

.07 %

Results Messages

| PatientName | Age | RoomNum | DoctorName | AgeGroup |
|-------------|-----|---------|------------|----------|
|-------------|-----|---------|------------|----------|

31. Show the number of admissions per insurance provider.

```
= select InsuranceProvider, Count(admissionType)
   FROM Patient p
  JOIN PatientCase pc ON pc.patientId = p.id
  JOIN Hospital h ON p.HospitalId = h.id
 group by InsuranceProvider
```

3 %

Results Messages

| InsuranceProvider | (No column name) |
|-------------------|------------------|
| Cigna | 2041 |
| Medicare | 1926 |
| Blue Cross | 2030 |
| UnitedHealthcare | 1978 |
| Aetna | 2025 |