SQL scripts for Claim Denial Analysis project using SQL

🧹 1. Show total number of claims

```sql
SELECT COUNT(*) AS total_claims
FROM claims;
```

📋 2. Show how many claims were approved or denied

```sql
SELECT claim_status, COUNT(*) AS count
FROM claims
GROUP BY claim_status;
```

📌 3. Find the most common billing codes

```sql
SELECT billing_code, COUNT(*) AS total
FROM claims
GROUP BY billing_code
ORDER BY total DESC;
```

👥 4. Check how many claims were denied by each procedure code

```sql
SELECT procedure_code, COUNT(*) AS denied_claims
FROM claims
WHERE claim_status = 'Denied'
GROUP BY procedure_code
ORDER BY denied_claims DESC;
```

💰 5. Find claims with high amount (example: above 10,000)

```sql
SELECT claim_id, claim_amount, claim_status
FROM claims
WHERE claim_amount > 10000;
```

🎯 6. Show denied claims for a specific diagnosis (example: 'D001')

```sql
SELECT *
FROM claims
WHERE diagnosis = 'D001' AND claim_status = 'Denied';
```

📅 7. Count of claims per diagnosis

```sql
SELECT diagnosis, COUNT(*) AS total_claims
FROM claims
GROUP BY diagnosis;
```

Tables

Claims
claim_id | patient_id | procedure_code | billing_code | diagnosis | claim_amount | claim_status
patients
patient_id | patient_name | age | gender

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8. Get patient name and their claim status
sql
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```sql
SELECT p.patient_name, c.claim_status
FROM claims c
JOIN patients p ON c.patient_id = p.patient_id;
```

9.Get denied claims for patients above 50 years old
sql
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```sql
SELECT p.patient_name, p.age, c.claim_id, c.claim_status
FROM claims c
JOIN patients p ON c.patient_id = p.patient_id
WHERE c.claim_status = 'Denied' AND p.age > 50;
```

10.Show claims with amount more than average
sql
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```sql
SELECT claim_id, claim_amount
FROM claims
WHERE claim_amount > (SELECT AVG(claim_amount) FROM claims);
```

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11. Subquery with IN: Show patients who have at least one denied claim
sql
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```sql
SELECT DISTINCT patient_id
FROM claims
WHERE patient_id IN (
    SELECT patient_id
    FROM claims
    WHERE claim_status = 'Denied'
);
```

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12. Join + Group By: Denied claim count by age group
sql
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```sql
SELECT
    CASE
        WHEN p.age < 30 THEN 'Below 30'
        WHEN p.age BETWEEN 30 AND 50 THEN '30-50'
        ELSE 'Above 50'
```

```sql
    END AS age_group,
    COUNT(*) AS denied_count
FROM claims c
JOIN patients p ON c.patient_id = p.patient_id
WHERE c.claim_status = 'Denied'
GROUP BY age_group;
```