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AI-generated content may be incorrect.SQL ASSESSMENT WORKBOOK V2 Step-3: Partnership Review – Error Rates, Tier Misalignment, Geographic Issues**

**EduFin SQL Skill Assessment Workbook: Step 3 Evaluation**

**Program: Skill AI Path – Data Analyst Pretraining Track  
Module: EduFin Risk Analytics Simulation  
Assessment Type: SQL Query Writing + Business Understanding  
Prepared For: EduFin Data Analyst Cohort  
Organization: Krishnav Tech | Skill AI Path**

**Objective**

To assess learners’ ability to:

* Identify **institutions with highest data error rates**.
* Evaluate **partnership tiers vs. actual performance**.
* Detect **geographic patterns of systemic discrepancies**.
* Provide **SQL-driven insights for immediate review**.

# SQL Skill Check Assessment – Pretraining Workbook

## PART A: Query Writing (60 points)

**Q1 (10 pts) — Institutional Error Rates**  
Write a query to calculate the error rate per institution as:

error\_rate\_pct = (SUM(loan\_amount) - SUM(reported\_amount)) \* 100 / SUM(loan\_amount)

Return top 5 institutions with the highest error\_rate\_pct.

**Your Answer:**

**Q2 (10 pts) — Tier Performance Misalignment**  
For each partnership\_tier, calculate average error\_rate\_pct.  
Return partnership tiers ordered by highest average error\_rate\_pct.

**Your Answer:**

**Q3 (10 pts) — Tier vs Institution Comparison**  
Write a query to flag institutions whose error\_rate\_pct is worse than the average of their own partnership\_tier.  
Columns: institution\_id, institution\_name, partnership\_tier, institution\_error\_pct, tier\_avg\_error\_pct.

**Your Answer:**

**Q4 (10 pts) — Geographic Partnership Issues**  
Using the dim\_state or dim\_city dimension, calculate total discrepancy per state.  
Return top 3 states with the highest discrepancies.

**Your Answer:**

**Q5 (10 pts) — Cross-Analysis (Tier + Geography)**  
Return a grouped report by partnership\_tier and state\_name showing: loan\_count, total\_disbursed, total\_reported, discrepancy, and error\_rate\_pct.

**Your Answer:**

**Q6 (10 pts) — Immediate Review Candidates**  
Combine results to output institutions where:

* error\_rate\_pct > 10% **AND**
* located in one of the top 3 high-discrepancy states.

Columns: institution\_name, partnership\_tier, state\_name, error\_rate\_pct.

**Your Answer:**

## PART B: Multiple Choice (40 points)

**Q7:** What does error\_rate\_pct > 10% indicate?  
A) Strong performance  
B) Systematic under-reporting  
C) Balanced reconciliation  
D) High repayment rate

**Answer:**

**Q8:** Why compare institution performance to tier averages?  
A) To check schema design  
B) To identify misalignment between tier label and actual data quality  
C) To validate joins  
D) To reduce loan volume

**Answer:**

**Q9:** Which SQL clause best detects geographic-level systemic issues?  
A) GROUP BY state\_name  
B) DISTINCT state\_name  
C) ORDER BY city\_id  
D) UNION

**Answer:**

**Q10:** If an institution in Tier-1 performs worse than Tier-3 average, what does it mean?  
A) Partnership tiering may be flawed  
B) Institution has fewer loans  
C) Reported\_amount is NULL  
D) State-level anomaly

**Answer:**

**Q11:** Which SQL construct is needed to flag institutions worse than their tier average?  
A) JOIN institution error rates with tier error rates  
B) COALESCE function  
C) ORDER BY only  
D) UNION ALL

**Answer:**

**Q12:** Geographic partnerships showing systemic issues suggest:  
A) Single-loan anomalies  
B) State-level or regional process weaknesses  
C) Payment matching errors  
D) Foreign key mismatches

**Answer:**

**Q13:** What type of SQL function is AVG(error\_rate\_pct)?  
A) Window function  
B) Scalar function  
C) Aggregate function  
D) String function

**Answer:**

**Q14:** Which analytic question directly aligns with Step 3?  
A) How to automate daily reconciliations?  
B) Which institutions and geographies need immediate review?  
C) How to optimize SELECT queries?  
D) How to calculate total loan disbursement?

**Answer:**

**Q15:** Which combination best represents Step 3 review scope?  
A) Institution, Tier, Geography  
B) Loan\_id only  
C) Payments only  
D) City\_id only

**Answer:**

**Q16:** If Tier-2 institutions consistently outperform Tier-1, what should analysts question?  
A) Data indexing strategy  
B) Validity of partnership tier classifications  
C) Whether foreign keys exist  
D) Choice of aggregate functions

**Answer:**

## Passing Criteria

* Minimum score: **80/100**
* Query section: **≥ 48/60**
* MCQ section: **≥ 32/40**
* Time: **90 minutes**

## Skills Validated

* Calculating **error rates per institution**.
* Benchmarking institutions vs. **tier averages**.
* Detecting **tier misalignment** in performance.
* Identifying **geographic systemic issues**.
* Producing **review-ready SQL insights**.

## Trainer Notes

* Begin with **institution-level error rates** to set the context.
* Move to **tier-level benchmarking** to show misalignments.
* Conclude with **geographic analysis** to highlight regional problem zones.
* Stress that Step 3 = **Which partnerships to review immediately**, not root cause fixes.

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