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AI-generated content may be incorrect.SQL ASSESSMENT WORKBOOK**

**V1: PORTFOLIO HEALTH**

**EduFin SQL Skill Assessment Workbook: *A Beginner-Friendly Guide to SQL Queries, Business Logic, and Output Interpretation***

**Program: Skill AI Path – Data Analyst Pretraining Track**

**Module: EduFin Risk Analytics Simulation**

**Assessment Type: Skill Validation – SQL Query Writing + Business Understanding**

**Prepared For: EduFin Data Analyst Cohort**

**Organization: Krishnav Tech | Skill AI Path**

**Objective**

To assess and validate your foundational SQL skills, including query construction, data validation, portfolio analysis, and interpretation of business logic, preparing you for real-world crisis scenarios in financial data analytics.

# SQL Skill Check Assessment – Pretraining WorkbooK

**Practice Exercise**

**Prompt:**  
Write a validation query to identify customers with suspicious income data (negative income, income above ₹50 crores, or missing income for employed customers).

**Your Answer:**

## PART A: Query Writing (60 points)

**Question 1 (10 points)**

**Write a query to show the total number of customers and the number of customers with complete data (having customer name, phone number, and annual income).**

**Your Answer:**

**Question 2 (10 points)**

**Group customers by employment type and show the count, average annual income, and percentage of total customers for each employment type.**

**Your Answer:**

**Question 3 (10 points)**

**Calculate the portfolio distribution showing loan status, count of loans, total loan amount formatted in Indian currency, and percentage of total portfolio value.**

**Your Answer:**

**Question 4 (10 points)**

**Create income categories (Low: <₹5L, Medium: ₹5L–₹15L, High: >₹15L) and show count and average income for each category with appropriate business recommendations.**

**Your Answer:**

**Question 5 (10 points)**

**Find the top 5 loan amounts and show customer details with loan information, ensuring all data is complete (no NULL values).**

**Your Answer:**

**Question 6 (10 points)**

**Write a data quality report showing the percentage of missing data in critical fields across customers and loans tables.**

**Your Answer:**

## PART B: Multiple Choice Questions (40 points)

**Select the correct option by marking A, B, C, or D.**

**Question 7:**

Which clause is used to filter grouped data?

* A) WHERE
* B) HAVING
* C) GROUP BY
* D) ORDER BY

**Answer:**

**Question 8:**

What does FORMAT(amount, 'C0', 'en-IN') do?

* A) Converts to US dollars
* B) Formats as Indian currency without decimals
* C) Creates percentage format
* D) Rounds to nearest thousand

**Answer:**

**Question 9:**

In percentage calculations, why multiply by 100.0 instead of 100?

* A) It's faster
* B) Prevents integer division issues
* C) Required by SQL standard
* D) No difference

**Answer:**

**Question 10:**

Which function handles NULL values in calculations?

* A) ISNULL()
* B) COALESCE()
* C) NULLIF()
* D) All of the above

**Answer:**

**Question 11:**

What’s the difference between COUNT(\*) and COUNT(column\_name)?

* A) No difference
* B) COUNT(\*) includes NULLs, COUNT(column) excludes NULLs
* C) COUNT(\*) is slower
* D) COUNT(column) counts only unique values

**Answer:**

**Question 12:**

Which CASE statement syntax is correct?

* A) CASE column WHEN value THEN result END
* B) CASE WHEN condition THEN result END
* C) Both A and B
* D) CASE IF condition THEN result END

**Answer:**

**Question 13:**

Why filter with WHERE disbursement\_date IS NOT NULL?

* A) Improves query performance
* B) Excludes incomplete loan records
* C) Prevents calculation errors
* D) All of the above

**Answer:**

**Question 14:**

What does ROUND(value, 2) do?

* A) Rounds to nearest integer
* B) Rounds to 2 decimal places
* C) Multiplies by 2
* D) Returns top 2 records

**Answer:**

**Question 15:**

Which ORDER BY clause sorts amounts from highest to lowest?

* A) ORDER BY amount
* B) ORDER BY amount ASC
* C) ORDER BY amount DESC
* D) ORDER BY amount HIGH

**Answer:**

**Question 16:**

In GROUP BY queries, which columns can appear in SELECT?

* A) Any column
* B) Only grouped columns and aggregated columns
* C) Only grouped columns
* D) Only aggregated columns

**Answer:**

## PASSING CRITERIA

* **Minimum Score Required:** 80 out of 100
* **Query Writing:** At least 48/60
* **MCQ Section:** At least 32/40
* **Time Limit:** 90 minutes
* **Retakes Allowed:** Unlimited until 80% is achieved

## SKILLS YOU VALIDATE

By completing this assessment successfully, you prove your understanding of:

* Data exploration & completeness checks
* COUNT, SUM, AVG usage
* GROUP BY and CASE logic
* Currency formatting in SQL (Indian format)
* Percentage calculations
* NULL handling
* Clean and business-presentable query writing

## STUDY RECOMMENDATIONS

* Practice all exercises thoroughly to build strong command on SQL basicsFocus on percentage and CASE logic
* Focus on percentage and CASE logic used for real-world business reportingLearn formatting queries for executives
* Be confident with missing data checks using IS NULL, IS NOT NULL, and COALESCE
* Learn how to format queries clearly for executives with proper aliases and structure
* Review Indian currency formatting: FORMAT(loan\_amount, 'C', 'en-IN')
* Revise GROUP BY and HAVING clauses for category-based aggregations
* Practice writing queries directly from business questions to simulate real analyst work
* Understand the difference between COUNT(\*) and COUNT(column) for accuracy
* Get familiar with aliasing and data labeling for clear and professional output

## NEXT STEP: SESSION 1 – Crisis Simulation

After passing:

* You'll use these exact skills on real EduFin crisis data
* Objective: Analyze and resolve a ₹12 crore portfolio discrepancy

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