SQL Bible – Phase 1: SQL Fundamentals (Day 1–Day 10)

Welcome to Phase 1 of the 60-Day SQL Bible! This phase focuses on SQL fundamentals, covering the essential concepts every Data Engineer must master. You'll learn the basics, practice on HackerRank & LeetCode, and solve real-world Data Engineering scenarios.

## Day 1: Introduction to SQL & SELECT Basics

Learn: SELECT, FROM, basic column selection

Scenario: Pull top 10 customer records for analytics

Practice: https://www.hackerrank.com/domains/sql/select

## Day 2: Filtering Data

Learn: WHERE, AND, OR, NOT

Scenario: Filter only active users for an ETL pipeline

Practice: https://leetcode.com/problemset/database/

## Day 3: Sorting & Limiting

Learn: ORDER BY, ASC, DESC, LIMIT

Scenario: Get top 5 highest-paying customers

Practice: HackerRank → Sorting problems

## Day 4: Removing Duplicates

Learn: DISTINCT

Scenario: Count unique products sold in the last month

Practice: HackerRank → Basic SELECT problems

## Day 5: Working with NULL

Learn: IS NULL, IS NOT NULL

Scenario: Find missing email addresses in customer table

Practice: HackerRank → NULL problems

## Day 6: Range Filtering

Learn: IN, BETWEEN

Scenario: Fetch transactions between two specific dates

Practice: LeetCode → BETWEEN practice problems

## Day 7: Pattern Matching

Learn: LIKE, NOT LIKE, Wildcards (%)

Scenario: Extract all emails ending with @gmail.com

Practice: HackerRank → LIKE operator challenges

## Day 8: Basic Aggregates

Learn: COUNT(), SUM(), MIN(), MAX(), AVG()

Scenario: Calculate total sales for Q1

Practice: https://www.hackerrank.com/domains/sql/aggregation

## Day 9: Combining Filters

Learn: Complex WHERE conditions + aggregates

Scenario: Get customers who purchased >5 products and spent >$500

Practice: HackerRank → Mixed queries

## Day 10: Mini Project

Project: Build a sales dashboard query set

Dataset: Orders, Customers, Products

Goal: Top 5 products, top 10 customers, missing orders report