MySQL Foundations – DML - Querying Data

Topics covered in the course.

A Simple Query
- o Introduction to SELECT syntax
- o Use of SELECT *
- o Use of LIMIT keyword
- o Selecting specific columns
- o Basic troubleshooting
- o Column alias names

Data Analysis 101
- o Tips & Tricks
- o Getting a count of total number of rows in a table
- o SELECT DISTINCT

Row Restriction
- o WHERE CLAUSE
- o Row restriction on numeric, string, and date/time data types
- o Using AND in row restriction
- o We continue to discuss data analysis in context to using row restriction
- o LIKE operator
- o NULL
- o Not operator
- o Row restriction using functions
- o Boolean logic and truth table theory as applied to SQL row restriction
- o Using OR in row restriction
- o IN operator

Query Optimization – Part One
- o Determining if you query is efficient
- o Explain Plans

SQL Functions
- o Numeric
  - o Round()
  - o Truncate()
  - o Mathematical expressions used in functions
- o String
  - o Case functions - Lower() Upper()
  - o Trim()
  - o Substring()

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- o Concatenation()
- o Length()
- o Datetime
  - o Date()
  - o Monthname()
  - o Dayname()
  - o Month()
  - o Date()
  - o Now()
  - o Year()
  - o Adddate()
  - o Datediff()
  - o Time()
  - o Hour()
  - o Minute()
  - o Second()
  - o Addtime()
- o Nesting Functions

CASE

- o Case statement
- o Formatting data
- o Display data from different columns into a single column

Joining Tables

- o Basic Join Syntax
- o Joins and Left Joins
- o E-R Diagrams
- o 1 to 1 Entity Relationships
- o 1 to Many Entity Relationships
- o Many to Many Entity Relationships
- o Orphans
- o Understanding the importance of row count when joining tables
- o Joining multiple foreign keys back to a single entity
- o Determining query efficiency on joined tables

Group By and Aggregate Functions
- o Having
- o Group By
- o Aggregate Functions

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- Sum
- Min/Max
- Standard Deviation