

MySQL Essentials

This MySQL training covers how create, configure, maintain, and deploy MySQL databases for web applications. You'll learn how to control and use the world's most popular database engine and the basics of what a MySQL database is best for, how to set one up, optimize it, connect it to apps, and more.

[CBT Nuggets course material](#) →

WEEK 1

Introduction to MySQL

156 min.

Intro to MySQL Database Server	7
Understanding Various Types of Database Engines	8
Learn About Relational Database Schemas	7
Methods of Running MySQL Databases	12
Tools for Managing MySQL Database Servers	11
Connecting to MySQL Server with Sqlectron	6

Create Tables in MySQL Databases

Overview	1
Intro to MySQL Table Management	11
Create Employees Table in MySQL	8
Add ID Field and NOT NULL Column Constraint	7
Enforce Unique Values on Employee ID Column with PRIMARY KEY Constraint	6
Enable Auto Incrementing on Employee ID Column	5
Add FullName Generated Virtual Column	9
Add BirthDate Field to Employees as DATE Type	7

Creating Tables with Constraints in MySQL

Overview	1
Intro to MySQL Table Constraints	14
Using PRIMARY KEY Constraints in MySQL	9
Create FOREIGN KEY References in MySQL	11
Query Data Across FOREIGN KEY References	5
Define Table CHECK Constraints in MySQL	9

WEEK 2

159 min.

Define Column CHECK Constraints in MySQL 4

Writing Select Queries in MySQL

Overview 1

Intro to SELECT Queries in MySQL 11

Select Columns and Set Aliases in MySQL 13

Use Function Expressions in MySQL SELECT Statements 9

Filter MySQL Query Results with WHERE Clause 10

Use GROUP BY and ORDER BY Statements 12

Working with Date and Time in MySQL Databases

Overview 1

Intro to Date-Time in MySQL 5

Overview: DateTime Data Types for MySQL Columns 13

Exploring DATETIME and TIMESTAMP Data Types 8

Date and Time Literals in MySQL Language 10

Built-in DateTime Manipulation Functions in MySQL 15

Understanding Windows in MySQL SELECT Statements

Overview 1

Intro to MySQL Windows 14

Build Sample Database for MySQL Windows 8

Use OVER Clause to Ask Deeper Questions 8

Create Named WINDOWS in MySQL SELECT Statements 13

WEEK 3

153 min.

Use Outer and Sub-queries to Filter Windows 8

Using MySQL Window Functions in SELECT Queries

Overview 1

Intro to MySQL Window Functions 6

Set Up Sample MySQL Database 9

RANK and DENSE_RANK MySQL Functions 15

Using the PERCENT_RANK Window Function in MySQL 7

Value Window Functions in MySQL 12

Divide MySQL Partitions into Buckets with NTILE 6

Writing User-Defined Routines in MySQL

Overview 1

Intro to MySQL Procedures and Functions 10

Create a MySQL Stored Procedure 9

Specify Parameters on MySQL Stored Procedures 10

Create and Invoke MySQL Functions 9

Implement Complex MySQL Routine Bodies 11

Using MySQL Triggers to Automate Database Activities

Overview 1

Intro to MySQL Triggers 12

Set up Containerized MySQL Environment 8

Logging MySQL Database Activity with Triggers 10

Retrieve INSERT Field Values Inside MySQL Triggers 5

WEEK 4

154 min.

Modify MySQL Data Rows with Triggers 9

Block Row Deletion with Conditional MySQL Triggers 6

Learn MySQL Views

Overview	1
Intro to MySQL Views	13
Create Calculated Columns with MySQL Views	11
Working with Invalid MySQL Views	12
Define User Security on MySQL Views	9
Updatable Views in MySQL	8
Triggers and Views in MySQL	5

Using Regular Expression Functions in MySQL

Overview	1
Overview of MySQL Regular Expression Functions	10
Using REGEXP_LIKE To Test Pattern Against Strings	11
Use REGEXP_INSTR to Find Pattern Occurrences in MySQL	15
Use REGEXP_REPLACE to Substitute String Values in MySQL	10
Use Regular Expressions in MySQL Functions	8

Partitioning Tables in MySQL Databases

Overview	1
Intro to MySQL Table Partitioning	9
Partition MySQL Tables by Range of Values	12

WEEK 5

154 min.

Partition MySQL Tables with List of Values	9
Partition MySQL Tables by HASH or KEY	10
Querying MySQL Engine for Partition Metadata	13

Learn MySQL Table Indexes

Overview	1
Intro to MySQL Table Indexes	9
Inject Sample Data Into MySQL Database	8
Create an Index on MySQL Tables	9
Monitor Index Utilization in MySQL Engine	8
Optimize ORDER BY Queries in MySQL with Indexes	9
Incorporate Indexes into MySQL Table Creation	6

Understanding MySQL Storage Engines

Overview	1
Intro to MySQL Storage Engines	9
Review the Default InnoDB MySQL Storage Engine	9
Explore the MySQL MyISAM Storage Engine	9
Create MySQL Tables with the CSV Storage Engine	9
Creating Tables with the MySQL MEMORY Storage Engine	8
Query Remote Data with Federated Tables in MySQL	13

Learn MySQL Database User Configuration

Overview	1
Intro to MySQL Users	10

WEEK 6

151 min.

Create MySQL Users	15
Configure Password Options for MySQL Users	10
Specify Resource Controls for MySQL Users	8
Enforce TLS Connections to MySQL Engine	10

Learn MySQL Database Privileges

Overview	1
Intro to MySQL Privileges	13
Grant Global Privileges to MySQL Engine	9
Grant Database Privileges to MySQL Users	9
Grant Table Privileges to MySQL Users	5
Grant Column Level Privileges to MySQL Users	7
Configure Proxy Users in MySQL	12

Backup and Restore MySQL Databases

Overview	1
Intro to MySQL Backup and Restore	11
Install mysqldump and Create Test Data	8
Backup and Restore an Entire MySQL Server	6
Backup and Restore Specific MySQL Tables	9
Version Controlling MySQL Backups	13

Use the MySQL Shell to Manage MySQL Databases

Overview	1
----------	---

WEEK 7

153 min.

Intro to MySQL Shell	15
Explore the MySQL Shell Environment	12
Run Bash Commands From MySQL Shell	7
Import JSON Data Using MySQL Shell	9
Run MySQL Shell in Batch Mode	8

Use PowerShell to Query MySQL Databases

Overview	1
----------	---

Intro to MySQL and PowerShell	9
Deploy MySQL and PowerShell Container Playground	14
Manage MySQL Connections with PowerShell	11
Create MySQL Database and Return DB List with PowerShell	8
Create MySQL Table and Iterate Over Data Rows with PowerShell	13

Manage MySQL Databases with phpMyAdmin

Overview	1
Intro to MySQL and phpMyAdmin	12
Overview of phpMyAdmin User Interface	6
Import and Explore Northwind Database with phpMyAdmin	10
Apply Custom Configuration for phpMyAdmin	7
Create MySQL Event Scheduler with phpMyAdmin	8

WEEK 8

152 min.

Monitoring MySQL with phpMyAdmin	5
----------------------------------	---

Use Python to Manage MySQL Databases

Overview	1
Intro to MySQL Python Connector	4
Set Up MySQL Server and Python Containers with VSCode	12
Establish Connection to MySQL using Python Connector	13
Create MySQL Databases and Tables with Python	10
Insert and Select Data from MySQL Tables with Python	10

Running MySQL on Azure

Overview	1
Intro to MySQL on Azure	11
Deploy an Azure Virtual Machine with MySQL	11
Deploy MySQL on Azure Database	16
Running MySQL on Azure Container Instances	16

Running MySQL on Amazon Web Services (AWS)

Overview	1
Intro to MySQL on AWS	11
Run MySQL on Amazon EC2 Virtual Machines	14
Run MySQL with Docker on EC2	13

WEEK 9

155 min.

Run MySQL on AWS Fargate	13
Run MySQL on Amazon Relational Database Service	11

Configure Active Directory Authentication for MySQL in Amazon RDS

Overview	1
Intro to Amazon RDS Integration with AWS Managed Microsoft Active Directory	10
Setting up an Amazon VPC Environment	7
Deploy Windows Server EC2 Client Instance	9
Deploy Amazon RDS MySQL Instance	6
Install and Test MySQL Client on EC2	15
Clean Up Your AWS Demo Environment	4

Configure InnoDB Cluster for MySQL

Overview	1
----------	---

Intro to MySQL InnoDB Cluster	10
Configure the MySQL Servers	15
Create the MySQL InnoDB Cluster	13
Add a Secondary MySQL Instance to InnoDB Cluster	11

Storing and Querying JSON Data in MySQL

Overview	1
Intro to JSON Storage in MySQL	13
Create MySQL Table with JSON Data Type	12

WEEK 10

151 min.

Validate JSON and Set Properties	12
Modify JSON Array Values in MySQL	10
JSON Schema Validation in MySQL	16

Using MySQL as a Document Storage System

Overview	1
Intro to MySQL Document Storage	13
Setting Up MySQL Document Test Environment	11
Import and Explore World_X MySQL Sample Database	8
Managing NoSQL Collections with MySQL Shell	11
About InnoDB Clustering for MySQL Document Storage	6

Managing Documents in MySQL Document Store

Overview	1
Intro to MySQL Document Management	10
Searching for Documents in MySQL Collections	12
Property Projection in MySQL Collection Searches	12

Adding Documents to MySQL Collections	9
Modify Existing Documents in MySQL Collections	7
Create an Index for MySQL Document Collection	8

Deploy MySQL-Compatible Databases on Planetscale

Overview	1
----------	---

WEEK 11

57 min.

Intro to Planetscale for MySQL Compatible Databases	6
Explore the Planetscale Console	11
Create and Deploy Branch in Planetscale	12
Connect to MySQL Database with Planetscale CLI Tool	11
Manage Database Branches with Planetscale CLI	12
Managing Database Passwords with Planetscale CLI	4