100+ MySQL interview questions with their answers, ranging from basic to more intermediate topics:

* **How do you create a new database in MySQL?**
  + **Answer:**

CREATE DATABASE database\_name;

- \*\*How do you create a new table in MySQL?\*\*  
   - \*\*Answer:\*\*  
```sql  
CREATE TABLE table\_name (  
    column1 datatype1,  
    column2 datatype2,  
    ...  
);

* **How do you insert values into a table?**
  + **Answer:**

INSERT INTO table\_name (column1, column2, ...)  
VALUES (value1, value2, ...);

- \*\*How do you retrieve all the columns from a table?\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT \* FROM table\_name;

* **How can you retrieve specific columns from a table?**
  + **Answer:**

SELECT column1, column2   
FROM table\_name;

- \*\*What is the use of the WHERE clause?\*\*  
   - \*\*Answer:\*\* To filter records based on specific conditions.  
- \*\*How would you fetch data from a table where the age is greater than 25?\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT \* FROM table\_name WHERE age > 25;

* **What are the different types of SQL JOINs?**
  + **Answer:** INNER JOIN, LEFT (or LEFT OUTER) JOIN, RIGHT (or RIGHT OUTER) JOIN, and FULL (or FULL OUTER) JOIN.
* **Write a SQL query to join two tables: students and courses, assuming each student is enrolled in a course and they share a common column course\_id.**
  + **Answer:**

SELECT \* FROM students   
INNER JOIN courses   
ON students.course\_id = courses.course\_id;

- \*\*What is the difference between the `HAVING` clause and the `WHERE` clause?\*\*  
   - \*\*Answer:\*\* `WHERE` filters records before aggregating in `GROUP BY`, whereas `HAVING` filters after aggregation.  
- \*\*How would you list the number of students enrolled in each course, but only display courses with more than 5 students?\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT course\_id, COUNT(student\_id) as number\_of\_students   
FROM enrollments   
GROUP BY course\_id   
HAVING number\_of\_students > 5;

* **What is the LIKE operator used for?**
  + **Answer:** To search for a specified pattern in a column.
* **Write a SQL query to find all students whose names start with 'A'.**
  + **Answer:**

SELECT \* FROM students WHERE name LIKE 'A%';

- \*\*How would you update a record in a table?\*\*  
   - \*\*Answer:\*\*  
```sql  
UPDATE table\_name   
SET column1 = value1, column2 = value2, ...  
WHERE some\_column = some\_value;

* **How can you delete records from a table?**
  + **Answer:**

DELETE FROM table\_name WHERE condition;

- \*\*How do you drop a table?\*\*  
   - \*\*Answer:\*\*  
```sql  
DROP TABLE table\_name;

* **What is the purpose of the ALTER table command?**
  + **Answer:** To modify an existing table structure, such as adding, deleting, or modifying columns.
* **How would you add a new column email to the students table?**
  + **Answer:**

ALTER TABLE students ADD COLUMN email VARCHAR(255);

- \*\*What does the `DISTINCT` keyword do in a SQL query?\*\*  
   - \*\*Answer:\*\* It removes duplicate rows from the result set.  
- \*\*Write a query to find the total number of distinct courses from the `enrollments` table.\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT COUNT(DISTINCT course\_id) FROM enrollments;

* **What does the EXISTS operator do?**
  + **Answer:** It tests for the existence of any record in a subquery.
* **Write a SQL query to find students who have enrolled in a course.**
  + **Answer:**

SELECT student\_id   
FROM students   
WHERE EXISTS (SELECT 1 FROM enrollments WHERE students.student\_id = enrollments.student\_id);

- \*\*How can you concatenate columns in MySQL?\*\*  
   - \*\*Answer:\*\* Using the `CONCAT()` function.  
- \*\*Write a query to get the full name of a student, given `first\_name` and `last\_name` columns.\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT CONCAT(first\_name, ' ', last\_name) as full\_name FROM students;

* **How do you find the total number of rows in a table?**
  + **Answer:**

SELECT COUNT(\*) FROM table\_name;

- \*\*How can you fetch the first 5 records from a table?\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT \* FROM table\_name LIMIT 5;

* **What is the difference between CHAR and VARCHAR data types?**
  + **Answer:** CHAR is fixed-length while VARCHAR is variable-length.
* **How can you change the data type of a column?**
  + **Answer:**

ALTER TABLE table\_name MODIFY column\_name NEW\_DATA\_TYPE;

- \*\*Write a SQL query to find the 3rd highest salary from a `salaries` table.\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT DISTINCT salary   
FROM salaries   
ORDER BY salary DESC   
LIMIT 1 OFFSET 2;

* **How do you create a primary key in a table?**
  + **Answer:**

ALTER TABLE table\_name ADD PRIMARY KEY (column\_name);

- \*\*What is a foreign key constraint, and why is it used?\*\*  
   - \*\*Answer:\*\* A foreign key constraint establishes a link between two tables and ensures that records in one table correspond to records in another. It's used to maintain referential integrity in the database.  
- \*\*How can you add a foreign key constraint to an existing table?\*\*  
   - \*\*Answer:\*\*  
```sql  
ALTER TABLE table\_name ADD FOREIGN KEY (column\_name) REFERENCES other\_table(other\_column);

* **How can you retrieve the unique values from a column?**
  + **Answer:**

SELECT DISTINCT column\_name FROM table\_name;

- \*\*What is the difference between an `INNER JOIN` and a `LEFT JOIN`?\*\*  
   - \*\*Answer:\*\* An `INNER JOIN` returns rows when there is a match in both tables, while a `LEFT JOIN` returns all rows from the left table and the matched rows from the right table. If there's no match, the result is `NULL` on the right side.  
- \*\*What is normalization, and why is it important?\*\*  
   - \*\*Answer:\*\* Normalization is the process of organizing a database to reduce redundancy and ensure data integrity. It divides larger tables into smaller ones and establishes relationships between them using foreign keys.  
- \*\*Describe 1NF, 2NF, and 3NF in database normalization.\*\*  
   - \*\*Answer:\*\*  
      - \*\*1NF (First Normal Form):\*\* Each table has a primary key, and all attributes are atomic (no repeating groups or arrays).  
      - \*\*2NF (Second Normal Form):\*\* All non-key attributes are fully functionally dependent on the primary key.  
      - \*\*3NF (Third Normal Form):\*\* All attributes are functionally dependent only on the primary key.  
   - \*\*What is a subquery, and how is it different from a JOIN?\*\*  
   - \*\*Answer:\*\* A subquery is a query nested inside another query. A subquery can return data that will be used in the main query as a condition. A JOIN is used to combine rows from two or more tables based on a related column.  
- \*\*Write a query to find employees whose salary is above the average salary.\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT employee\_name, salary   
FROM employees   
WHERE salary > (SELECT AVG(salary) FROM employees);

* **What is a stored procedure in MySQL?**
  + **Answer:** A stored procedure is a precompiled group of SQL statements stored in the database. It can be invoked as needed.
* **How can you handle errors in stored procedures?**
  + **Answer:** In MySQL, you can use the DECLARE statement to define error handlers using CONTINUE or EXIT handlers.
* **How do you prevent SQL injection in your queries?**
  + **Answer:** Use parameterized queries or prepared statements, avoid constructing queries with string concatenation using external input, and always validate and sanitize user input.
* **What are TRIGGERS in MySQL?**
  + **Answer:** Triggers are automatic actions that the database can perform when a specified change occurs (like an INSERT, UPDATE, or DELETE operation).
* **Can you explain the difference between CHAR\_LENGTH and LENGTH functions?**
  + **Answer:** CHAR\_LENGTH returns the number of characters in a string, while LENGTH returns the number of bytes. For single-byte character sets, they return the same value.
* **What is the purpose of the GROUP\_CONCAT function in MySQL?**
  + **Answer:** GROUP\_CONCAT returns a concatenated string of aggregated data values for each group of rows in the result set.
* **Write a SQL query to concatenate all names from the employees table into a single string, separated by commas.**
  + **Answer:**

SELECT GROUP\_CONCAT(employee\_name) FROM employees;

- \*\*How can you create an index in MySQL?\*\*  
   - \*\*Answer:\*\*  
```sql  
CREATE INDEX index\_name ON table\_name(column\_name);

* **What is the difference between a clustered and a non-clustered index?**
  + **Answer:** A clustered index determines the physical order of data in a table. A table can have only one clustered index. Non-clustered indexes, on the other hand, do not determine the physical order and a table can have multiple non-clustered indexes.
* **What are views in MySQL, and why are they used?**
  + **Answer:** A view is a virtual table based on the result-set of an SQL statement. They allow encapsulating complex queries, providing a simplified representation or hiding certain data.
* **What are transactions in MySQL?**
  + **Answer:** Transactions are a sequence of one or more SQL operations executed as a single unit. They ensure data integrity, following the ACID properties (Atomicity, Consistency, Isolation, Durability).
* **How do you start and commit a transaction in MySQL?**
  + **Answer:** ```sql START TRANSACTION;
  + SQL operations COMMIT;

- \*\*What is the difference between `UNION` and `UNION ALL`?\*\*  
   - \*\*Answer:\*\* `UNION` returns unique records from the combined dataset, while `UNION ALL` returns all records, including duplicates.  
- \*\*What are the advantages of using stored procedures?\*\*  
   - \*\*Answer:\*\* They provide better performance as they are precompiled, help in modular programming, offer a security mechanism, and reduce network traffic.  
- \*\*What is the difference between `DATEDIFF` and `TIMESTAMPDIFF` in MySQL?\*\*  
   - \*\*Answer:\*\* Both are used to find the difference between two dates, but `TIMESTAMPDIFF` allows for a more specific interval, like month or year, while `DATEDIFF` returns the difference in days.  
- \*\*How do you clone a table in MySQL?\*\*  
   - \*\*Answer:\*\*  
```sql  
CREATE TABLE new\_table AS SELECT \* FROM existing\_table;

* **Write a SQL query to rank employees based on their salary in descending order.**
  + **Answer:**

SELECT employee\_name, salary, RANK() OVER(ORDER BY salary DESC) AS ranking   
FROM employees;

- \*\*How do you remove duplicate rows in a table?\*\*  
   - \*\*Answer:\*\* One common way is to create a new table with the distinct rows and delete the original table:  
```sql  
CREATE TABLE new\_table AS SELECT DISTINCT \* FROM original\_table;  
DROP TABLE original\_table;  
RENAME TABLE new\_table TO original\_table;

* **What are the default storage engines in MySQL?**
  + **Answer:** The default storage engine was MyISAM up to MySQL 5.5, but InnoDB became the default from MySQL 5.5 onward.
* **What is a self-join, and why would you use it?**
  + **Answer:** A self-join is a join of a table to
* **What is the purpose of the SET data type in MySQL?**
  + **Answer:** The SET type is used to store a set of strings. You can store zero or more string values chosen from a list defined at table creation time.

CREATE TABLE t1 (colors SET('red', 'blue', 'green'));  
INSERT INTO t1 (colors) VALUES ('red,blue');

- \*\*How do you implement pagination in MySQL?\*\*  
   - \*\*Answer:\*\* Using `LIMIT` and `OFFSET`.  
```sql  
SELECT \* FROM table\_name LIMIT 10 OFFSET 20;  -- Skips the first 20 records and fetches the next 10.

* **How can you retrieve the month part from a DATE field in MySQL?**
  + **Answer:** Using the MONTH() function.

SELECT MONTH(date\_column) FROM table\_name;

- \*\*How do you convert a `DATETIME` field into a Unix timestamp?\*\*  
   - \*\*Answer:\*\* Using the `UNIX\_TIMESTAMP()` function.  
```sql  
SELECT UNIX\_TIMESTAMP(datetime\_column) FROM table\_name;

* **How can you perform a case-sensitive search in a column?**
  + **Answer:** Using the BINARY keyword.

SELECT \* FROM table\_name WHERE BINARY column\_name = 'Value';

- \*\*How can you transpose rows into columns, and vice versa, in a query result?\*\*  
   - \*\*Answer:\*\* This process is known as "Pivoting". To convert rows to columns, you use a combination of aggregate functions with `CASE` statements. For the reverse, known as "Unpivoting", you can use `UNION ALL`.  
```sql  
-- Pivoting:  
SELECT   
    SUM(CASE WHEN column = 'value1' THEN 1 ELSE 0 END) AS 'Value1',  
    SUM(CASE WHEN column = 'value2' THEN 1 ELSE 0 END) AS 'Value2'  
FROM table\_name;  
  
-- Unpivoting:  
SELECT 'Value1' AS 'Column', Value1 AS 'Value' FROM table\_name  
UNION ALL  
SELECT 'Value2' AS 'Column', Value2 AS 'Value' FROM table\_name;

* **How can you get a list of all indexes in a database?**
  + **Answer:**

SHOW INDEXES FROM table\_name IN database\_name;

- \*\*How can you optimize a MySQL query?\*\*  
   - \*\*Answer:\*\* Some methods include using `EXPLAIN` to analyze the query plan, indexing appropriate columns, avoiding the use of wildcard characters at the start of a `LIKE` query, and avoiding the use of `SELECT \*`.  
- \*\*What is the difference between `MyISAM` and `InnoDB`?\*\*  
   - \*\*Answer:\*\* Major differences include:  
      - `InnoDB` supports ACID-compliant transactions, whereas `MyISAM` does not.  
      - `InnoDB` supports foreign key constraints, while `MyISAM` does not.  
      - `MyISAM` typically offers better read performance, while `InnoDB` offers better write performance.  
   - \*\*How can you lock a table explicitly?\*\*  
   - \*\*Answer:\*\*  
```sql  
LOCK TABLES table\_name READ|WRITE; --Lock for reading/writing  
UNLOCK TABLES; --To release the lock

* **How do you get the second highest value from a table column?**
  + **Answer:**

SELECT MAX(column\_name) FROM table\_name WHERE column\_name < (SELECT MAX(column\_name) FROM table\_name);

- \*\*What is a correlated subquery?\*\*  
   - \*\*Answer:\*\* A correlated subquery is a subquery that references columns from the outer query. It's executed once for each row processed by the outer query.  
```sql  
SELECT column\_name   
FROM table\_name t1  
WHERE some\_value = (SELECT MAX(column\_name) FROM table\_name t2 WHERE t1.id = t2.id);

* **How can you increase the performance of a MySQL database?**
  + **Answer:** Optimize queries using EXPLAIN, use indexes wisely, normalize database schema, consider hardware upgrades, and configure database parameters appropriately in my.cnf or my.ini.
* **How do you backup and restore a MySQL database?**
  + **Answer:**

mysqldump -u username -p database\_name > backup.sql

To restore:  
  
```bash  
mysql -u username -p database\_name < backup.sql

* **What are the different types of MySQL collations?**
  + **Answer:** Collations specify the rules for string comparison. There are various types like utf8\_general\_ci, utf8mb4\_unicode\_ci, and latin1\_general\_ci.
* **How do you find the total number of rows affected by a query?**
  + **Answer:**

SELECT ROW\_COUNT();

- \*\*Explain the difference between `CHAR` and `VARCHAR` data types.\*\*  
   - \*\*Answer:\*\* `CHAR` has a fixed length, while `VARCHAR` has a variable length. For `CHAR`, unused spaces are filled with blank spaces, whereas `VARCHAR` only uses the required storage plus one or two extra bytes for the length.  
- \*\*How can you change the data type of a column in MySQL?\*\*  
   - \*\*Answer:\*\*  
```sql  
ALTER TABLE table\_name MODIFY column\_name NEW\_DATA\_TYPE;

* **How can you measure the size of a MySQL database?**
  + **Answer:**

SELECT table\_schema AS "Database", ROUND(SUM(data\_length + index\_length) / 1024 / 1024, 2) AS "Size (MB)"   
FROM information\_schema.TABLES   
GROUP BY table\_schema;

- \*\*How can you delete all records from a table without deleting the table?\*\*  
   - \*\*Answer:\*\*  
```sql  
TRUNCATE TABLE table\_name;

* **How can you prevent a query from displaying duplicate rows?**
  + **Answer:**

SELECT DISTINCT column\_name FROM table\_name;

- \*\*How do you combine results from multiple SQL queries and return a single table?\*\*  
   - \*\*Answer:\*\* You can use the `UNION` or `UNION ALL` operator, depending on whether or not you want duplicate records.  
- \*\*How can you convert a string to upper-case in MySQL?\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT UPPER(column\_name) FROM table\_name;

* **How can you remove leading and trailing whitespace from a string in MySQL?**
  + **Answer:**

SELECT TRIM(column\_name) FROM table\_name;

- \*\*Explain the purpose of `information\_schema` in MySQL.\*\*  
   - \*\*Answer:\*\* `information\_schema` is a meta-database that provides detailed information about all other databases, tables, columns, indexes, constraints, etc. present in the MySQL server.  
- \*\*How can you ensure that a field value is unique across the table, other than using the `PRIMARY KEY` constraint?\*\*  
   - \*\*Answer:\*\* Use the `UNIQUE` constraint on the desired column.  
```sql  
ALTER TABLE table\_name ADD UNIQUE (column\_name);

* **How can you count the total number of tables in a database?**
  + **Answer:**

SELECT COUNT(\*) FROM information\_schema.tables WHERE table\_schema = 'your\_database\_name';

- \*\*How can you find all the tables that have a specific column name in a database?\*\*  
   - \*\*Answer:\*\*  
```sql  
SELECT table\_name   
FROM information\_schema.columns   
WHERE column\_name = 'desired\_column' AND table\_schema = 'your\_database\_name';

* **How can you replace a specific string in a field?**
  + **Answer:**

UPDATE table\_name SET column\_name = REPLACE(column\_name, 'old\_string', 'new\_string');

- \*\*What is the difference between `NOW()` and `CURDATE()` functions in MySQL?\*\*  
   - \*\*Answer:\*\* `NOW()` returns the current date and time, while `CURDATE()` returns only the current date.  
  
These questions cover a range of advanced topics and should help in assessing the depth of knowledge of individuals familiar with MySQL.  
  
  
  
  
  
\*\*89. Explain the `WITH` clause and provide an example.\*\*  
  
  
- \*\*Answer:\*\* The `WITH` clause, also known as Common Table Expressions (CTE), provides a temporary result set that you can reference within a `SELECT`, `INSERT`, `UPDATE`, or `DELETE` statement. It's useful for breaking down complex queries.  
  
```sql  
WITH CTE\_Name AS (  
    SELECT column1, column2  
    FROM table\_name  
    WHERE condition  
)  
SELECT \* FROM CTE\_Name;

**90. What is a self-join and why would you use it?**

* **Answer:** A self-join is a join where a table is joined with itself. It's useful for finding relationships within the same table.

SELECT A.column\_name, B.column\_name   
FROM table\_name A, table\_name B   
WHERE A.column\_name = B.column\_name;

**91. What are the different types of subqueries? Explain with examples.**

* **Answer:** There are three types:
* Scalar subquery: Returns a single value.

SELECT column\_name   
FROM table\_name   
WHERE another\_column = (SELECT MAX(column\_name) FROM table\_name);

* Row subquery: Returns a single row.

SELECT column1, column2   
FROM table\_name   
WHERE (column1, column2) = (SELECT column1, column2 FROM another\_table WHERE condition);

* Table subquery: Returns a table.

SELECT column\_name   
FROM (  
  SELECT column\_name FROM table\_name WHERE condition  
) AS subquery\_name;

**92. How can you update data in one table based on data in another table?**

* **Answer:**

UPDATE table1  
SET table1.column\_name = table2.column\_name  
FROM table2  
WHERE table1.another\_column = table2.another\_column;

**93. How can you retrieve a random row from a table?**

* **Answer:**

SELECT column\_name FROM table\_name ORDER BY RAND() LIMIT 1;

**94. What's the difference between INNER JOIN and OUTER JOIN?**

* **Answer:** INNER JOIN returns rows when there's a match in both tables. OUTER JOIN returns all rows from one table and the matching rows from the other table, filling with NULL if no match is found.

**95. How can you clone a table, including both data and schema?**

* **Answer:**

CREATE TABLE new\_table AS SELECT \* FROM original\_table;

**96. How do you insert multiple rows in a single SQL query?**

* **Answer:**

INSERT INTO table\_name (column1, column2)   
VALUES (value1a, value2a),   
       (value1b, value2b),   
       ...;

**97. Explain partitions in MySQL. How do you create them?**

* **Answer:** Partitioning divides a table into smaller, more manageable pieces, yet still being treated as a single table. It can improve performance and assist in organizing large datasets.

CREATE TABLE table\_name (  
   column\_name1 INT,  
   column\_name2 DATE  
)  
PARTITION BY RANGE(YEAR(column\_name2)) (  
   PARTITION p0 VALUES LESS THAN (1991),  
   PARTITION p1 VALUES LESS THAN (1995),  
   PARTITION p2 VALUES LESS THAN (1999)  
);

**98. What is the GROUP\_CONCAT function and provide an example.**

* **Answer:** It's used to concatenate values from multiple rows into a single string.

SELECT group\_column, GROUP\_CONCAT(value\_column)  
FROM table\_name  
GROUP BY group\_column;

**99. How can you prevent SQL injection in your queries?**

* **Answer:** Using parameterized queries or prepared statements. In PHP, for instance, you'd use PDO or MySQLi to bind parameters.

**100. How do you show the current SQL mode, and how can you change it?**

* **Answer:**

SELECT @@sql\_mode;  -- To show  
SET sql\_mode = 'modes';  -- To change

**101. What is a transaction and how would you use it in MySQL?**

* **Answer:** Transactions group a set of tasks into a single execution unit. If one task fails, all fail. Useful for maintaining data integrity.

START TRANSACTION;  
INSERT INTO table\_name1 ...;  
INSERT INTO table\_name2 ...;  
COMMIT;  -- Or ROLLBACK;

**102. What are the differences between VARCHAR and TEXT data types?**

* **Answer:** While both are used to store strings, VARCHAR can store up to 65,535 characters and you can specify its max length, while TEXT can store up to 65,535 characters without specifying max length. VARCHAR can have a default value, but TEXT cannot.

**103. How do you find and fix broken foreign key constraints?**

* **Answer:** Identify them using a LEFT JOIN to find orphaned records, and either delete these records or update them to restore referential integrity.

**104. How do you use FULLTEXT indexing in MySQL?**

* **Answer:** FULLTEXT indexes are used for full-text searches. You can create one with:

CREATE FULLTEXT INDEX index\_name ON table\_name(column\_name);

Then you'd search with:

SELECT \* FROM table\_name WHERE MATCH(column\_name) AGAINST('search term');

**105. How can you check for index fragmentation on a table and defragment it?**

* **Answer:** You can check fragmentation using SHOW TABLE STATUS LIKE 'table\_name'; and optimize (defragment) using OPTIMIZE TABLE table\_name;.

**106. How can you convert character sets in columns?**

* **Answer:**

ALTER TABLE table\_name MODIFY column\_name COLUMN\_TYPE CHARACTER SET charset\_name;

**107. How do you schedule a recurring SQL script execution in MySQL?**

* **Answer:** Using MySQL's Event Scheduler. First, ensure the scheduler is on with SHOW VARIABLES LIKE 'event\_scheduler';, then create your scheduled event.

**108. What are MySQL stored procedures and how do you use them?**

* **Answer:** Stored procedures are SQL codes saved in the database to be reused. Created using CREATE PROCEDURE, and called via CALL procedure\_name().

**109. How would you monitor the performance of your MySQL database in real-time?**

* **Answer:** Tools like SHOW PROCESSLIST, Performance Schema, MySQL Enterprise Monitor, and third-party tools like Percona Monitoring and Management.

**110. How can you run SQL script from the command line without entering the MySQL console?**

* **Answer:** Use:

mysql -u username -p database\_name < script.sql

**111. What is the EXPLAIN keyword in MySQL?**

* **Answer:** EXPLAIN provides a query execution plan, showing how MySQL will execute the query, which can be vital for optimization.

**112. How do you enforce a column to not accept NULL values?**

* **Answer:** By adding the NOT NULL constraint during table creation or modification.

**113. How do you rename a database in MySQL?**

* **Answer:** MySQL does not have a straightforward command to rename a database. Instead, one common approach is to dump the database, create a new one with the desired name, and then restore the dumped database into the new one.

**114. How can you reset the auto-increment value of a column?**

* **Answer:**

ALTER TABLE table\_name AUTO\_INCREMENT = value;

**115. How can you handle time zones in MySQL?**

* **Answer:** MySQL provides the CONVERT\_TZ() function to convert datetime values across time zones. Additionally, SET time\_zone = timezone; sets the time zone for the current session.

**116. How do you retrieve only a specified number of characters from a string column?**

* **Answer:**

SELECT LEFT(column\_name, number\_of\_chars) FROM table\_name;

**117. What are views in MySQL and why are they used?**

* **Answer:** Views are virtual tables based on the result set of an SQL statement. They encapsulate the SQL statement and present data in a simplified manner, ensuring data abstraction, protection, and to represent a subset of the data.

**118. How do you find the second highest value in a column?**

* **Answer:**

SELECT MAX(column\_name)   
FROM table\_name   
WHERE column\_name NOT IN (SELECT MAX(column\_name) FROM table\_name);

These questions should serve well for interviews at product-based companies that expect a deep understanding of MySQL.