- Added a JSON merge function intended to conform to RFC 7396. `JSON_MERGE_PATCH()`, when used on 2 JSON objects, merges them into a single JSON object that has as members a union of the following sets:

  - Each member of the first object for which there is no member with the same key in the second object.
  - Each member of the second object for which there is no member having the same key in the first object, and whose value is not the JSON `null` literal.
  - Each member having a key that exists in both objects, and whose value in the second object is not the JSON `null` literal.

  As part of this work, the `JSON_MERGE()` function has been renamed `JSON_MERGE_PRESERVE()`. `JSON_MERGE()` continues to be recognized as an alias for `JSON_MERGE_PRESERVE()` in MySQL 8.0, but is now deprecated and is subject to removal in a future version of MySQL.

  For more information and examples, see Section 12.18.4, “Functions That Modify JSON Values”.

- Implemented “last duplicate key wins” normalization of duplicate keys, consistent with RFC 7159 and most JavaScript parsers. An example of this behavior is shown here, where only the rightmost member having the key `x` is preserved:

```
mysql> SELECT JSON_OBJECT('x', '32', 'y', '[true, false]',
     >                    'x', '"abc"', 'x', '100') AS Result;
+-----------------------------------+
| Result                            |
+-----------------------------------+
| {"x": "100", "y": "[true, false]"} |
+-----------------------------------+
1 row in set (0.00 sec)
```

  Values inserted into MySQL `JSON` columns are also normalized in this way, as shown in this example:

```
mysql> CREATE TABLE t1 (c1 JSON);

mysql> INSERT INTO t1 VALUES ('{"x": 17, "x": "red", "x": [3, 5, 7]}');

mysql> SELECT c1 FROM t1;
+------------------+
| c1               |
+------------------+
| {"x": [3, 5, 7]} |
+------------------+
```

  This is an incompatible change from previous versions of MySQL, where a “first duplicate key wins” algorithm was used in such cases.

  See Normalization, Merging, and Autowrapping of JSON Values, for more information and examples.

- Added the `JSON_TABLE()` function in MySQL 8.0.4. This function accepts JSON data and returns it as a relational table having the specified columns.

  This function has the syntax `JSON_TABLE(expr, path COLUMNS column_list) [AS] alias)`, where *`expr`* is an expression that returns JSON data, *`path`* is a JSON path applied to the source, and *`column_list`* is a list of column definitions. An example is shown here:

```
mysql> SELECT *
    -> FROM
```