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Character sets: utf8mb4, collation, and the question marks in your text

Databases

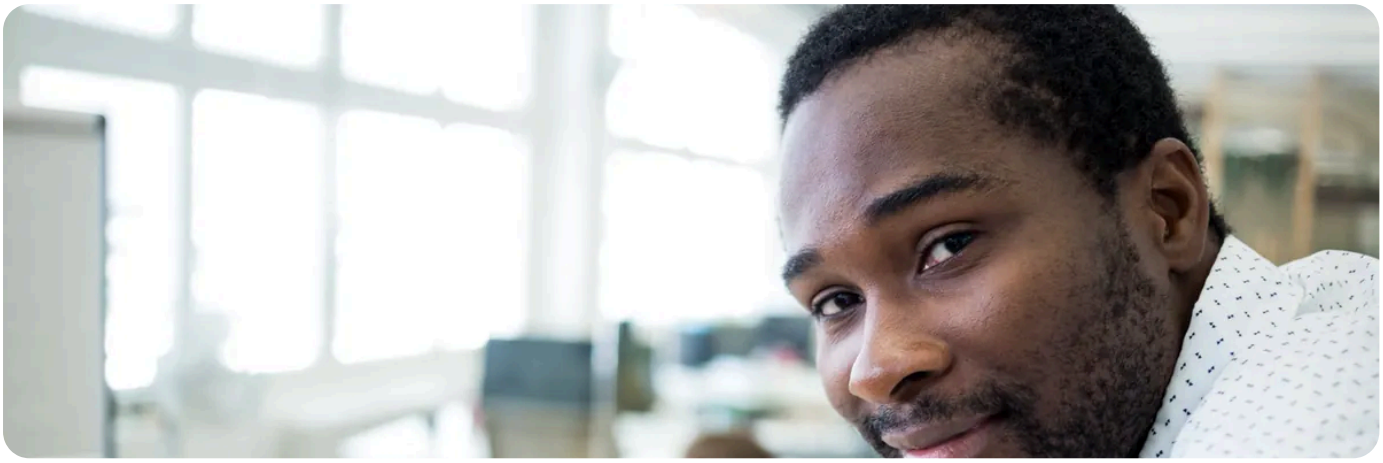
CODE	VERSION	COUNTRY · LANGUAGE
RLX-MZ-KB-780	v2026.10.10	Mozambique · English

Interweb Mozambique
RLX Holdings, S.A. · Group RLX Holdings
Tax ID (NUIT) 401 191 607 · Legal entity no. (NUEL) 105 045 974 · Economic activity code (CAE) 62022

https://www.meu.interweb.co.mz/knowledgebase/780

Character sets: utf8mb4, collation, and the question marks in your text

Databases Created on **October 10, 2026** 3 min read



If accented text shows up as **???** or as **Ã©** instead of **é**, the database, the connection and the page **are not speaking the same character set**. The rule that fixes almost everything is to use **utf8mb4** in all three: in the database, in the application's connection and in the page (`<meta charset="utf-8">`).

The three places the fault can be

Where	How you see it	How to fix it
The page	Accents break even when the database is right.	Declare `utf-8` in the page and save the file as UTF-8.
The connection	**???** or **Ã©** appear only when the text passes through the application.	Ask for `utf8mb4` when connecting. In PDO, `charset=utf8mb4` in the DSN. In mysqli, `set_charset('utf8mb4')`. See **the PHP example**.
The database or the table	Saving emoji fails, or characters are lost.	Convert to `utf8mb4` (below).

Converting a database and its tables

1. **Make a copy first.** See **exporting with phpMyAdmin**.

2. On the phpMyAdmin **SQL** tab, for the database:

```
ALTER DATABASE account_database CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;
```

3. For each table:

```
ALTER TABLE table_name CONVERT TO CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;
```

4. In the application ask for `utf8mb4` on the connection. In WordPress, `DB_CHARSET` in `wp-config.php` should be `utf8mb4`.

5. Test by saving a text with an accent and an emoji, and reading it back.

Converting does not recover what is already lost.
If the database stored "???" in place of the letters, those letters are gone: converting does not bring them back. Only an old copy or retyping the text will. And when the text came out as **Ã©** (not ???), you have a double-encoding problem, which needs care: ask for help before touching it.

Term	What it is
`utf8mb4`	The full character set: accents, alphabets, emoji. The one to use.
`utf8` (or `utf8mb3`)	A shorter version that cannot store emoji or some other characters.
Collation	The rule for comparing and sorting. `utf8mb4_unicode_ci` is a safe choice here.
`utf8mb4_0900_ai_ci`	A MySQL 8 collation. MariaDB does not know it. See **MySQL or MariaDB**.

How to see what the database has

On the phpMyAdmin SQL tab, `SHOW CREATE TABLE table_name;` shows the table's character set and collation, and `SHOW VARIABLES LIKE 'character_set%';` shows the values of the connection you are using. If the table says `utf8mb4` and the text comes out wrong, the fault is in the connection or the page. If the table says `latin1` and the text has emoji, that is the problem. Finding the right place before converting saves you from touching what was not broken.

For a WordPress site,
also check where the connection is defined. See **rebuilding the wp-config.php connection**.

NEED A HAND?

Accents still broken after all this? Tell us the page address and what the database shows in phpMyAdmin and we will look.

Open a support ticket →

SEE ALSO

- **Importing a database with phpMyAdmin, and the size limit that stops you** →
- **MySQL or MariaDB: which one runs here, and does it matter** →
- **What time the server is on, and why PHP and MySQL can disagree** →

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