

## **1. Introduction**

Database localisation utilises translation table method in localisation for book names, genres and their authors and row localisation for persisting data about the selected language of the user.

## **2. Database Tables Overview**

When querying for genres, authors or book names we get the translated\_name and translated\_description from their respective tables, if the user has another language than default (English) selected. If no translation is found for the selected language we default to English.

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```
CREATE TABLE genre_translations (
    genre_id INT NOT NULL,
    language_code VARCHAR(5) NOT NULL,
    translated_name VARCHAR(50) NOT NULL,
    translated_description TEXT,
    PRIMARY KEY (genre_id, language_code),
    FOREIGN KEY (genre_id) REFERENCES genres (id) ON DELETE CASCADE
);
```

image shows database table where localised information about genres can be stored

---

```
CREATE TABLE author_translations (
    author_id INT NOT NULL,
    language_code VARCHAR(5) NOT NULL,
    translated_name VARCHAR(50) NOT NULL,
    translated_description TEXT,
    PRIMARY KEY (author_id, language_code),
    FOREIGN KEY (author_id) REFERENCES authors (id) ON DELETE CASCADE
);
```

image shows database table where localised information about authors can be stored

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```
CREATE TABLE book_translations (
    book_id INT NOT NULL,
    language_code VARCHAR(5) NOT NULL,
    translated_title VARCHAR(255) NOT NULL,
    translated_description TEXT,
    PRIMARY KEY (book_id, language_code),
    FOREIGN KEY (book_id) REFERENCES books (id) ON DELETE CASCADE
);
```

```
CREATE TABLE users (
    id          INT PRIMARY KEY AUTO_INCREMENT,
    username    VARCHAR(50) NOT NULL UNIQUE,
    email       VARCHAR(100) NOT NULL UNIQUE,
    password_hash VARCHAR(255) NOT NULL,
    role        ENUM('user', 'admin') NOT NULL DEFAULT 'user',
    created_at   TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    language_code VARCHAR(5) NOT NULL DEFAULT 'en'
);
```

image shows database table for users with the additional "language\_code" row added

Information about the user chosen language from the application is registered to the "language\_code" row of users table, and on subsequent log-ins by the user their preferred language will be applied automatically to the application.