

The Rookies - Database Design (Prototype)

This document describes the structure of the **TheRookies.mdf** database used for the ASP.NET web application project. It serves as a prototype schema using SQL Server LocalDB. Each table uses a **slug-based primary key** (human-readable unique string) and includes a **soft delete** mechanism (*is_deleted*, *deleted_at*, *deleted_by_slug*) to logically remove data without permanent deletion.

Tables Overview

Users	Stores user info such as name, email, role, and soft delete fields.
Classes	Represents classes created by teachers and joined by students.
Enrollments	Links users and classes with role (student/teacher/assistant).
Quizzes	Contains quiz details created by teachers (title, mode, published).
Questions	Stores questions linked to quizzes with JSON options.
QuizAssignments	Assigns quizzes to classes with availability and due dates.
Attempts	Tracks user quiz attempts, scores, and hint usage.
Leaderboards	Displays XP and badge rankings for students and classes.
Badges	Defines badges that can be earned by users.
UserBadges	Links users to badges earned.
Resources	Stores materials uploaded by teachers for each class.
Announcements	Announcements posted by teachers in each class.
Notifications	System or user-specific notifications (JSON payloads).
XpLedger	Tracks XP changes with reasons and references.
AuditLog	Logs user actions for prototype testing and debugging.
AppSettings	Stores key-value configuration for the app.

Soft Delete: Instead of deleting records, the *is_deleted* flag is set to 1. Queries should always include a filter **WHERE is_deleted = 0**. **Slug IDs:** Each record uses a string identifier like user-8fa21bcd to simplify references across the system and improve readability in URLs.

Prototype Mode: This database is designed without foreign key restrictions to allow flexible testing and rapid prototyping within Visual Studio LocalDB.