**MySQL 数据库设计**

A screenshot of a computer

AI-generated content may be incorrect.

A screen shot of a computer code

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规则：

主题目的内容确定规则：为主题序号与子题，或者新的主题，或者分数直接的内容；子题内容为确定规则：子题序号，或者分数，或者下一个子题，或者子子题中间的内容。子子题内容确定规则：为子子题序号和分数中间的内容。前面主题没有结束不能生产新的主题，对于子题和子子题也是同样的逻辑。主题结束的标志是发现了子题，或者分数。子题结束的条件是发现分数标记，新的子题，或者发现子子题。对于子子题结束的标志就是发现分数。

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目前在数据库结构中：

✅ **教材结构表（sections, chapters, keypoints）**

✅ **题库结构表（questions, sub\_questions, subsub\_questions）**

-- ✅ 多对多关系表：题目 <-> 知识点

CREATE TABLE question\_keypoints (

question\_id INT NOT NULL,

keypoint\_id INT NOT NULL,

PRIMARY KEY (question\_id, keypoint\_id),

FOREIGN KEY (question\_id) REFERENCES questions(id) ON DELETE CASCADE,

FOREIGN KEY (keypoint\_id) REFERENCES keypoints(id) ON DELETE CASCADE

);

CREATE TABLE sub\_question\_keypoints (

sub\_question\_id INT NOT NULL,

keypoint\_id INT NOT NULL,

PRIMARY KEY (sub\_question\_id, keypoint\_id),

FOREIGN KEY (sub\_question\_id) REFERENCES sub\_questions(id) ON DELETE CASCADE,

FOREIGN KEY (keypoint\_id) REFERENCES keypoints(id) ON DELETE CASCADE

);

CREATE TABLE subsub\_question\_keypoints (

subsub\_question\_id INT NOT NULL,

keypoint\_id INT NOT NULL,

PRIMARY KEY (subsub\_question\_id, keypoint\_id),

FOREIGN KEY (subsub\_question\_id) REFERENCES subsub\_questions(id) ON DELETE CASCADE,

FOREIGN KEY (keypoint\_id) REFERENCES keypoints(id) ON DELETE CASCADE

);