

## Mongoose

### 1. What does this technology (library/framework/service) accomplish for you?

We used Mongoose to model our application data. The solution is straight-forward, schema-based. It includes built-in type casting, validation, query building, business logic hooks, etc. Currently we used Mongoose to model the user's basic information and data of email validation.

### 2. How does this technology accomplish what it does?

#### Type casting

MongoDB's own data format is BSON, which has a basic type system. Mongoose implements more types and user-defined classes based on business needs, which makes data modeling more flexible.

#### Validation mechanism

Because MongoDB is a Schema-less database-it allows a wide variety of documents of different shapes in a collection. Such heterogeneity is not entirely a good thing in systems where human-computer interaction exists. A malicious (or hand disabled) user may be able to easily inject some other data that is not relevant to the system into your database.

Therefore, the validation of the data (Validation) is very important, and supporting these at the bottom of the database is very troublesome, because the validation logic may be very complex and may depend on something outside the database.

Therefore, it is more reliable to verify the data before the data is stored in the database to ensure the consistency of the data model. Mongoose has a relatively complete verification mechanism. Users can easily write custom verification functions to meet various needs.

#### Query building

The query builder is a thing that constructs MongoDB query statements, essentially string concatenation. But it does more to prevent SQL injection, and uses the prepare mechanism to prevent malicious users from doing strange things through the injection point.

In addition, the design of the constructor is very friendly to object-oriented programmers.

#### Business logic hooks

In fact, I prefer to use Trigger to describe it.

Mongoose encapsulates the underlying triggers of MongoDB and can use event-driven events.

Such as: "When you create a new document, do one thing" requirements, you can use Mongoose to manage such a logic.

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