Mongoose

1. Reasons to add Mongoose layer
    a. Mongoose provides a straightforward, schema-based solution to modeling your application data and includes, out of the box
        i. Built-in type casting
        ii. Validation (also include with plain MongoDB as of v. 3.2)
        iii. Query building
        iv. Business logic hooks (middleware)
    b. Mongoose features
        i. Schemas
            1. Real-life data has often structure
            2. Real-life data has often types
            3. Do more with less work
            4. Everything in Mongoose starts with a Schema. Each schema maps to a MongoDB collection and defines the shape of the documents within that collection
            5. http://mongoosejs.com/docs/guide.html
            6. Schema Types
                a. String
                b. Number
                c. Date
                d. Buffer
                e. Boolean
                f. Mixed
                g. ObjectId
                h. Array
        ii. Models
            1. Models are fancy constructors compiled from our Schema definitions. Instances of these models represent documents which can be saved and retrieved from our database. All document creation and retrieval from the database is handled by these models.
        iii. Validation
            1. Validation is defined in the SchemaType
            2. Validation is an internal piece of middleware
            3. Validation occurs when a document attempts to be saved, after defaults have been applied

4. Validators are not run on undefined values. The only exception is the required validator. Validation is asynchronously recursive; when you call Model#save, sub-document validation is executed as well. If an error occurs, your Model#save callback receives it
5. Validation supports complete customization

iv. MiddleWare

1. Middleware (also called pre and post *hooks*) are functions which are passed control during execution of asynchronous functions. Middleware is specified on the schema level and is useful for writing plugins. Mongoose 4.0 has 2 types of middleware: document middleware and query middleware. Document middleware is supported for the following document functions.
2. http://mongoosejs.com/docs/middleware.html