qwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmrtyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnmqwertyuiopasdfghjklzxcvbnm

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| Nimra Aamir 16l-4189  12/7/2018 |

# Answer: 1

Mongodb is the database where data is stored while Mongoose is the object data modeling (ODM) library or in simpler words, a tool, which is used to interact with mongodb. We used moongose in our MEAN application because we were not directly using mongodb. We used mongoose to access our database.

## Example:

Suppose we have database named ‘db’ and collection named ‘collection’.

**For creating new document:**

Db.collection.insertOne([

{

Field1:”value1”,

Field2:”value2”

}

]

)

**For inserting more than one document at a time:**

Db.collection.insertMany(

[

{

Field1:”value1”,

Field2:”value2”

},

{

Field1:”value3”,

Field2:”value4”

}

])

**Reading the existing document:**

Db.collection.find();

With query:

Db.collection.find({field1:value});

**Updating the existing document:**

db.collection.updateOne({field1:”value”})

db.collection.updateMany()

**Deleting the existing document:**

db.collection.deleteOne({field1:”value”})

db.collection.updateMany()

# Answer: 2

Some browsers don’t support put method in Ajax. POST was used in Ajax application so that the error doesn’t occur. However, if the browser being used supports PUT then in employee example, PUT can be used and it will work same like POST method.

# Answer: 3

No, put cannot be used for partial updates. PUT method requires all fields and if I just specify one field e.g. my name in the PUT method then only this entity will be left in the document and other data will be lost.( eg if the document has name,studentID and gpa and I just specify my name in PUT then the studentID and gpa will be set to NULL) .

# Answer:4

AngularJS uses MVC architecture which is complex and fixed but it ensures reusability.

REACT does not have follow MVC architecture but has FLUX which is easy and efficient to use.JSX can be used for writing applications in REACT but it is not compulsory and simple JAVASCRIPT and HTML can be used which makes it easier.

AngularJS uses two-way binding for connecting DOM to model using controller. It creates a watcher for each binding. Performance gets affected when there are too many watchers running in an application. It also makes it slower. REACT uses one-way data binding and lessons the DOM operations which makes it faster and more efficient. Angular uses browser’s DOM while REACT has its own virtual DOM.

AngularJS uses JavaScript which is superset of JavaScript while REACT uses JSX which is extension of JavaScript with XML and it is easier to use.

# Answer: 5

Vue.js is javascript framework which allows developers to create client side applications or user interfaces using JavaScript. Vue is lightweight & easy to learn. This framework combines best features of REACT and AngularJS. It has two way data binding facility like Angular and virtual DOM like React.  Vue.js is easiest to learn than angularJS and REACT. Angular focuses on SPAs and gives a lot of tools for that. Whereas REACT and VUE.js allows you to create single page apps but requires you to install routing packages. For multi page applications, angularJS is not a good choice. REACT is also a good for MPAs but it forces to use components whereas vue.js does not. React, Angular and Vue are pretty similar when it comes to runtime performance and have good performance. Vue.js is much smaller (58.8K) compared to React (139K) and Angular (566K).in terms of scalability, angularJS is recommended for big projects. React is highly testable and scalable and Vue.js may lack a list of best scaling practices, but works just fine for big projects. PayPal and YouTube use angularJS. Facebook, Netflix, Instagram, WhatsApp and Dropbox use REACT. GitLab, Codeship and Alibaba use VUE.js. Vue.js is new compared to ANGULAR and REACT but it is gaining popularity with each passing day.

# Answer: 6

**Architecture:** The architecture of AngularJS is based on model-view-controller (MVC) design. In AngularIO, controllers and $scope were replaced by components and directives. Components are directives with a template.

**Language:** AngularJS is written in JavaScript. AngularIO uses TypeScript language, which is a superset of ES6

**Syntax:** in AngularJS, to bind an image or property or an event, you have to remember the right ng-directive. AngularIO uses “( )” for event binding and “[ ]” for property binding.

**Mobile Support:** AngularJS was not built with mobile support but AngularIO features mobile support.

**Routing:** AngularJS uses $routeprovider.when() to configure routing while AngularIO uses @RouteConfig{(…)}.

# Answer: 7

Linting is a process in which code is checked for errors.

JSLint is a code analysis tool which is used to check if JavaScript code compiles with coding rules.

ESLint allows developers to create their own linting rules. ESLint is designed to have all rules completely pluggable. It has default rules covering all of the rules that exist in JSLint and JSHint, it has configurable rules including error levels that allow you to decide what a warning, error, is or simply disabled. It provides rules for style checking and it allows you write your own plugins and rules.

## Examples of ESLint:

In package.json write:

**1-**

{

"env": {

"browser": true,

},

"globals": {

"angular": true,

},

"rules": {

"camelcase": 2,

"curly": 2,

"brace-style": [2, "1tbs"],

"quotes": [2, "single"],

"semi": [2, "always"],

"space-in-brackets": [2, "never"],

"space-infix-ops": 2,

}

}

**2-**

{

"parser": "esprima",

"rules": {

"semi": "error"

}

}

# Answer: 8

If I am building a simple website for example a website that consists of details about different products and allows users to add details, then I will go for Ajax but if I am building an app like Gmail then I will use Angular. For single websites, AJAX is preferred but for SPAs where data is being continuously updated, angularJS is preferred.