**Ques 1 -** Define MERN stack?

MERN stands for MongoDB, Express, React, Node, after the four key technologies that make up the stack.

* MongoDB - document database
* Express(.js) - Node.js web framework
* React(.js) - a client-side JavaScript framework
* Node(.js) - the premier JavaScript web server

Express and Node make up the middle (application) tier. Express.js is a server-side web framework, and Node.js the popular and powerful JavaScript server platform. Regardless of which variant you choose, ME(RVA)N is the ideal approach to working with JavaScript and JSON, all the way through.

**Ques 2 -** Describe the features of NodeJS

Following are some of the important features that make Node.js the first choice of software architects.

* **Asynchronous and Event Driven** − All APIs of Node.js library are asynchronous, that is, non-blocking. It essentially means a Node.js based server never waits for an API to return data. The server moves to the next API after calling it and a notification mechanism of Events of Node.js helps the server to get a response from the previous API call.
* **Very Fast** − Being built on Google Chrome's V8 JavaScript Engine, Node.js library is very fast in code execution.
* **Single Threaded but Highly Scalable** − Node.js uses a single threaded model with event looping. Event mechanism helps the server to respond in a non-blocking way and makes the server highly scalable as opposed to traditional servers which create limited threads to handle requests. Node.js uses a single threaded program and the same program can provide service to a much larger number of requests than traditional servers like Apache HTTP Server.
* **No Buffering** − Node.js applications never buffer any data. These applications simply output the data in chunks.
* **License** − Node.js is released under the [MIT license](https://raw.githubusercontent.com/joyent/node/v0.12.0/LICENSE).

**Ques 3 -** what is the purpose of ExpressJs?

ExpressJS is a prebuilt NodeJS framework that can help you in creating server-side web applications faster and smarter. Simplicity, minimalism, flexibility, scalability are some of its characteristics and since it is made in NodeJS itself, it inherited its performance as well.

In short, ExpressJS did for NodeJS what Bootstrap did for HTML/CSS and responsive web design.

It made coding in NodeJS a piece of cake and gave programmers some additional features to extend their server-side coding. ExpressJS is hands down the most famous NodeJS framework- so much so that when most people talk about NodeJS they surely mean NodeJS+ExpressJS.

**Ques 4 -** How does React work ? What are the advantages of ReactJS?

React.js is an open-source JavaScript library that is used for building user interfaces specifically for single-page applications. It’s used for handling the view layer for web and mobile apps. React also allows us to create reusable UI components. React was first created by Jordan Walke, a software engineer working for Facebook. React first deployed on Facebook’s newsfeed in 2011 and on Instagram.com in 2012.

React allows developers to create large web applications that can change data, without reloading the page. The main purpose of React is to be fast, scalable, and simple. It works only on user interfaces in the application. This corresponds to the view in the MVC template. It can be used with a combination of other JavaScript libraries or frameworks, such as Angular JS in MVC.

React.js properties includes the following

* React.js is declarative
* React.js is simple
* React.js is component based
* React.js supports server side
* React.js is extensive
* React.js is fast
* React.js is easy to learn

**Ques 5 -** What is JSX?

In React, instead of using regular JavaScript for templating, it uses JSX. JSX is a simple JavaScript that allows HTML quoting and uses these HTML tag syntax to render subcomponents. HTML syntax is processed into JavaScript calls of React Framework. We can also write in pure old JavaScript.

**Ques 6 -** Difference between npx and npm?

Npm is a **tool that use to install packages**. Npx is a tool that use to execute packages. Packages used by npm are installed globally you have to care about pollution for the long term. Packages used by npx are not installed globally so you have to carefree for the pollution for the long term.

**Ques 7 -**  Define MongoDb?

**MongoDB** is a document-oriented NoSQL database used for high volume data storage. Instead of using tables and rows as in the traditional relational databases, MongoDB makes use of collections and documents. Documents consist of key-value pairs which are the basic unit of data in MongoDB. Collections contain sets of documents and function which is the equivalent of relational database tables. MongoDB is a database which came into light around the mid-2000s.

**Ques 8 -** Is it free to use NodeJs ?

Node.js is a cross-platform runtime environment for JavaScript, which is free and open-sourced. It is full-stack, so it can be used to develop both the client-side and the server-side of an application.

**Ques 9 -** Which file holds various metadata relevant to the project? Define it in brief.

**Metadata** is "[data](https://en.wikipedia.org/wiki/Data) that provides information about other data",but not the content of the data, such as the text of a message or the image itself. There are many distinct types of metadata, including:

* **Descriptive metadata** — the descriptive information about a resource. It is used for discovery and identification. It includes elements such as title, abstract, author, and keywords.
* **Structural metadata** — metadata about containers of data and indicates how compound objects are put together, for example, how pages are ordered to form chapters. It describes the types, versions, relationships and other characteristics of digital materials.
* **Administrative metadata**— the information to help manage a resource, like resource type, permissions, and when and how it was created.
* **Reference metadata** — the information about the contents and quality of statistical data.
* **Statistical metadata**, also called process data, may describe processes that collect, process, or produce statistical data.
* **Legal metadata** — provides information about the creator, copyright holder, and public licensing, if provided.

**Ques 10 -** How do you update npm to a new version in NodeJs?

1. Update Node. ...
2. Update npm: To update NPM, use the following command: npm install -g npm.
3. Below is a demonstration for updating Node. ...
4. Check if nvm is installed successfully Open a new terminal nvm -v.
5. To install latest version of node, use the following command.

**Ques 11 -** Explain module. Exports in NodeJs?

The **module.exports** in Node.js is used to export any literal, function or object as a module. It is used to include JavaScript file into node.js applications. The **module** is similar to variable that is used to represent the current module and **exports** is an object that is exposed as a module.

**Syntax:**

* module.exports = literal | function | object

**Explanation:** Here the assigned value (literal | function | object) is directly exposed as a module and can be used directly.

* module.exports.variable = literal | function | object

**Explanation:** Here the assigned value (literal | function | object) is indirectly exposed as a module and can be consumed using the variable.