Interview Questions

1. What is node.js?

Answer: Node.js is a JavaScript runtime built on chrome’s V8 JavaScript engine.

1. Why we use node.js?

Answer: Node.js Light and cross-platform, highly scalable, huge numbers of packages and libraries etc.

1. What is window and global object?

Answer: The global object provides variables and functions that are available anywhere. By default, those that are built into the language or the environment. In a browser it is named, for Node.js it is global, for other environments it may have another name. The window object represents an open window in a browser. If a document contain frames (<iframe> tags), the browser creates one window object for the HTML.

1. What is Class in Node.js?

Answer: Classes are a template for creating objects. Classes are used in object oriented programming to describe one or more object.

1. What is Async-Await?

Answer: Async and await make promises easier to write. Async makes a function return a Promise and await makes a function wait for a Promise

1. Why we use Asynchronous Pattern in Node.js?

Answer: Asynchronous Pattern returns a promise. Execution of one task is not dependent on other.

1. What is callback hell?

Answer: This is a big issue caused by coding with complex nested callbacks. Here, each and every callback takes an argument that is a result of the previous callbacks. In this manner, The code structure looks like a pyramid, making it difficult to read and maintain. Also, if there is an error in one function, then all other functions get affected.

1. How can we replace callback?

Answer: callback can be replace by using promise. It is more convenient compared to callback.

1. What is express.js?

Answer: Express is a minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications.

1. What is module in Node.js?

Answer: Consider modules to be the same as JavaScript libraries. A set of functions you want to include in your application.

1. What is http module?

Answer: Node.js has a built-in module called HTTP, which allows Node.js to transfer data over the Hyper Text Transfer Protocol (HTTP).

1. What is file system module?

Answer: The Node.js file system module allows you to work with the file system on your computer.

1. What is Package.json?

Answer: The package. json file is the heart of any Node project. It records important metadata about a project which is required before publishing to NPM, and also defines functional attributes of a project that npm uses to install dependencies, run scripts, and identify the entry point to our package.

1. Explain the Purpose of module.exports?

Answer: A module in Node.js is used to encapsulate all the related codes into a single unit of code which can be interpreted by shifting all related functions into a single file.

1. List down the major security implementations within Node.js?

Answer: Major security implementations in Node.js are: Authentications and Error handling.

1. What is middleware in Express?

Answer: Middleware functions are functions that has access to the request object , the response object and the next function in the applications request-response cycle.

1. What is third Party middleware?

Answer: Use third-party middleware to add functionality to Express apps. Install the Node.js module for the required functionality, then load it in your app at the application level or at the router level.

1. What is built in middleware?

Answer: Express has the following built-in middleware functions:

[express.static](https://expressjs.com/en/4x/api.html#express.static): serves static assets such as HTML files, images, and so on.

[express.json](https://expressjs.com/en/4x/api.html#express.json): parses incoming requests with JSON payloads. NOTE: Available with Express 4.16.0+

[express.urlencoded](https://expressjs.com/en/4x/api.html#express.urlencoded): parses incoming requests with URL-encoded payloads. NOTE: Available with Express 4.16.0+

1. What is call back function?

Answer: A callback is a function passed as an argument to another function .This technique allows a function to call another function. A callback function can run after another function has finished

1. What is NPM?

Answer: NPM is the default package manager for the JavaScript runtime environment Node.js.

1. What is GIT?

Answer: GIT is free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

1. What is V8 engine?

Answer: V8 is Google's open source high-performance JavaScript and WebAssembly engine, written in C++. It is used in Chrome and in Node.js, among others.

1. What is server?

Answer: A web server is software and hardware that uses HTTP and other protocols to respond to client requests made all over the world.

1. What is MVC framework?

Answer: Model, View, Controller is an architectural pattern that separates an application into three main logical components.

1. What is Express router?

Answer: The express.Router function is used to create a new router object. This function is used when you want to create a new router object in your program to handle requests.

1. What is ES6?

Answer: ECMAScript 2015 was the second major revision to JavaScript. It brought several new features in JavaScript.

1. What is Asynchronous feature of Node.js?

Answer: Asynchronous function can return promise objects instead of concrete value.

1. What is Promises in Node.js?

Answer: Promise manages asynchronous data activities. An action which will either be completed or rejected.

1. What is client server communication (Http)?

Answer: The Hypertext Transfer Protocol (HTTP) is designed to enable communications between clients and servers. HTTP works as a request-response protocol between a client and server.

1. What is GET and POST?

Answer: GET is used to request data from a specified resource. POST is used to send data to a server to create/update a resource.

1. What is PUT and Delete?

Answer: PUT is used to send data to a server to create/update a resource. The DELETE method deletes the specified resource.

1. What is mongodb?

Answer: MongoDb is a source available, cross platform, document oriented database program. Classified as a NoSQL database program.

1. What is CRUD operations in MongoDB?

Answer: To Create, Read, Update and Delete database and collection in MongoDB shell is called CRUD.

1. What is JSON web token?

Answer: Compact and self-contained way for securely transmitting information between parties as a JSON object. Information can be verified and trusted because it is digitally signed.

1. What is mongoose?

Answer: Mongoose is an Object Data Modeling library for MongoDB and Node.js.

1. What is Mongoose Schema?

Answer: Everything in Mongoose starts with a Schema. Each schema maps to a MongoDB collection and defines the shape of the documents within that collection.

1. What is Mongo Shell?

Answer: The mongo shell is an interactive JavaScript interface to MongoDB for create, read, update and delete data.

1. What is collection in MongoDB?

Answer: MongoDB stores data records as documents (specifically BSON documents) which are gathered together in collections.

1. What are the advantages of MongoDB?

Answer: Schema less − MongoDB is a document database in which one collection holds different documents. Number of fields, content and size of the document can differ from one document to another.

* Structure of a single object is clear.
* No complex joins.
* Deep query-ability. MongoDB supports dynamic queries on documents using a document-based query language that's nearly as powerful as SQL.
* Tuning.
* Ease of scale-out − MongoDB is easy to scale.
* Conversion/mapping of application objects to database objects not needed.
* Uses internal memory for storing the (windowed) working set, enabling faster access of data.

1. What are the data types in MongoDB?

Answer: Data type is an essential component of a language or script that is used to define the type of data being used in framing the database. It is important for you to know that MongoDB stores data in BSON format

1. What is REST API?

Answer: A REST API is an architectural style for an application programming interface that uses HTTP requests to access and use data.

1. What is request response cycle?

Answer: The web is a cycle of requests and responses that flow between clients and servers. A client is a piece of computer hardware or software that accesses a service made available by a server. Generally, clients are web browsers (like Chrome or Firefox), but clients can also be API’s making requests to another server or the command line (when making cURL requests).

1. What are the key features of MongoDB?

Answer: MongoDB is a scalable, flexible [NoSQL](https://www.mongodb.com/nosql-explained) document database platform designed to overcome the relational databases approach and the limitations of other NoSQL solutions. MongoDB is well known for its horizontal scaling and load balancing capabilities, which has given application developers an unprecedented level of flexibility and scalability.

1. What is JSON?

Answer: JSON stands for JavaScript Object Notation. JSON is a lightweight data interchange format.

1. What is BSON?

Answer: BSON is a binary encoded JavaScript object notation. A textual object notation widely used to transmit and store data across web applications.

1. What is URL?

Answer: A URL(uniform resource locator) is a unique identifier used to locate a resource on the internet.

1. What is URI?

Answer: URI(uniform resource identifier) is a sequence of characters that distinguishes one resource from another.

1. What is Postman?

Answer: Postman is an API platform for building and using APIs.

1. What is MongoDB compass?

Answer: Compass is an interactive tool for querying, optimizing and analyzing MongoDB data.

1. What is MongoDB Atlas?

Answer: MongoDB Atlas is a multi cloud developer data platform. It is fully managed cloud database platform.