**1) What is JSON? Explain.**

JSON is the abbreviation of JavaScript Object Notation. It is one of the simplest data interchange format, independent of programming language and platform. Its lightweight text-based structure makes it easily readable. It is derived from JavaScript for presenting simple data in the form of key-value pairs.

It is often used for serialization and transmission of data between the network connections. It is mostly used for data transmission between a web application and the server thereby making it a popular alternative to the XML format.

**2) Who is known as the father of JSON?**

Douglas Crockford is known as the father of JSON. Douglas Crockford was the person who originally defined the JSON format back in 2000.

**3) Do all the programming languages and platforms support JSON?**

Yes, most of the technologies that work with the data transmission between the systems, support JSON format. Due to its text-based nature, nearly all the programming languages and platforms can support JSON. These include Javascript, C, C++, C#, Perl, Java, Python, Php, etc.

**4) What is meant by JSON objects?**

An object is defined as a set of key-value pairs. A JSON starts with a left brace “{“ and ends with another right brace “}”. Every key is followed by a colon “:” and the key-value pairs are separated from each other by using a comma “,”. So, basically, the JSON object is a collection of keys along with their values arranged in a pre-specified JSON format.

**5) What is the extension of the JSON file?**

A JSON file has an extension of “.json”. Being in a text-based format, a JSON file can be viewed or edited using any text editor like notepad or notepad++.

**6) Explain in detail about the advantages and features of JSON?**

JSON structure possesses numerous advantages over the other data interchange formats. **They are:**

* Easy to use and fast nature. JSON syntax offers easy parsing of data and even faster implementation. The light-weight structure of JSON allows it to respond at a much faster rate.
* Compatible with numerous operating systems and browsers. This allows JSON schema to be attuned to many platforms without any extra effort to make sure its compatibility with another platform.
* Supports a wide range of data types including integers, double, String, Boolean, etc.
* It is used while writing JavaScript based applications that includes browser extensions and websites.
* JSON format is used for serializing and transmitting structured data over network connection.
* It is primarily used to transmit data between a server and web applications.
* Web services and APIs use JSON format to provide public data.
* It can be used with modern programming languages.
* Smaller message size
* More structural information in the document
* Can easily distinguish between the number 1 and the string "1" as numbers, strings (and Booleans) are represented differently in JSON.
* Can easily distinguish between single items and collections of size one (using JSON arrays).
* Easier to represent a null value
* Easily consumed by JavaScript

**7) What are the limitations of JSON?**

JSON is one of the most popular data interchange format available in today's scenario. It has several advantages over the other formats but at the same time, it also has its own set of limitations too. They are:

* As the data gets complex with several nested or hierarchical structures, it becomes complex for human readability.
* JSON is not suitable for handling very complex large data.
* JSON doesn’t have support for handling multimedia formats such as rich text or images.
* It doesn’t support comments.

**8) What are the uses of JSON?**

JSON is mainly used for data interchange between the two systems.

* JSON is prominently used for transmission of serialized data over a network connection between two systems.
* APIs and web services use JSON to format and transfer data.
* JSON can be used in combination with most of the modern programming languages.
* JSON can be used with JavaScript applications such as browser plugins and websites.
* JSON can be used to read data from the web server and display data on the web pages.

**9) Explain JSON syntax rules?**

There are several rules that describe the structure of the JSON. **These are:**

* Data inside a JSON is arranged in key-value pair. The left side represents the key and the data on the right side represents value. Both key and value are separated by a colon “:”.
* Each set of key-value pair is separated from the other pair by using a comma “,”.
* Curly braces define the JSON objects. Left curly brace “{“ represents the start of the object and right curly brace “}” represents the end of an object.
* Arrays are defined inside a JSON object by using square brackets “[ ]”.

**10) What are the advantages of JSON over XML?**

JSON has emerged as one of the most popular data interchange methods. It has several advantages over the XML that has to help it to replace XML as a most popular data transfer format.

* JSON is lighter and faster than the XML.
* JSON has object types but XML doesn’t define objects as types. JSON has different object type for a different set of data such as string, integer, Boolean, array, etc. All XML objects are categorized as just one data type, i.e. string.
* JSON data can be easily accessed as a JSON object using JavaScript. On the other hand, the XML data need to be parsed and allocated to the variables using APIs. Getting value out of a JSON is as easy as reading an object from your JavaScript programming.

This text-based lightweight nature makes JSON more accessible and useful than XML.

**11) What are the similarities between JSON and XML?**

There are several similarities that can be found between JSON and XML. T**hey are:**

* Both JSON and XML are used to transfer data between different systems.
* Both JSON and XML have a simple structure and are readable by the human.
* Both are independent of programming language.
* Both JSON and XML supports nested or hierarchical structures.
* Both of these can be parsed easily through several programming.
* Both these structures have support for Unicode.

**12) Name the browsers that support JSON format?**

Support for JSON is included in almost all the new versions of the browsers. Internet Explorer, Chrome, Safari, Mozilla Firefox, etc. all support JSON format.

**13) Can a comment be added inside a JSON file?**

As per the structure, JSON doesn’t support any comments. Although, a Key or data object can be used to hold your comments. We need to just make sure that during the processing of the JSON, your application ignores the given data element.

**14) What is the use of JSON.parse in JavaScript?**

It is used to parse the data present inside the JSON into objects for using its values.

The syntax used to parse JSON data:

string json = ‘{

"Brand": "Hyundai",

"Name": "Verna",

"Color": “Red”

}’

var obj = JSON.parse(json);

This will convert JSON data into the object from which we can retrieve the data for use with the application.

**15) Explain JSONP in a simple language.**

**Answer:** JSONP is also known as JSON with Padding. It is a communication technique used by the JavaScript programs to call data from a server that is present in a domain, which is different than that of the client. JSONP allows the users to share data without the restriction of the cross-domain or same-origin policy of the system and the environment. JSONP is a method for sending JSON data without worrying about cross-domain issues. JSONP does not use the XMLHttpRequest object. JSONP uses the <script> tag instead.

**16) What are the limitations of JSONP?**

**Answer:** JSONP is used to bypass the same-origin policy of web browsers. It may seem like a perfect way to get around the restriction but it has its own set of limitations as well. **They are:**

* As all the JSONP calls are made by including a <script> tag, the request made is confined only to the GET method.
* It cannot be used for POST or PUT requests.
* It can be used only for read-only services and APIs.

**17) What does JSON stand for?**

JSON stands for “JavaScript Object Notation”.

**18) Is JSON is a language?**

JSON is a data format. It could be classified as a language, but not a programming language. Its relationship to JavaScript is that it shares its syntax (more or less) with a subset of JavaScript literals

**19) What are the properties of JSON?**

These properties make JSON an ideal data-interchange language.

JSON is built on two structures:

A collection of name/value pairs. In various languages, this is realized as an object, record, struct, dictionary, hash table, keyed list, or associative array.

An ordered list of values. In most languages, this is realized as an array, vector, list, or sequence.

These are universal data structures. Virtually all modern programming languages support them in one form or another. It makes sense that a data format that is interchangeable with programming languages also be based on these structures.

**20) Why do we use JSON?**

The JSON format is often used for serializing and transmitting structured data over a network connection. It is used primarily to transmit data between a server and web application, serving as an alternative to XML.

**21) What is JSON data?**

JSON, or JavaScript Object Notation, is a minimal, readable format for structuring data. In JSON data is nothing but a information. It is used primarily to transmit data between a server and web application, as an alternative to XML.

**22) What is the difference between XML and JSON?**

The fundamental difference, which no other answer seems to have mentioned, is that XML is a markup language (as it actually says in its name), whereas JSON is a way of representing objects (as also noted in its name). This is what makes markup languages so useful for representing documents

**23) Why JSON format is better than XML?**

JSON and XML used different formats. When compared both JSON is easy to write and use it applications then XML. The XML format can also be determined by the XML DTD or XML Schema (XSL) and can be tested.

The JSON a data-exchange format which is getting more popular as the JavaScript applications possible format. Basically this is an object notation array. JSON has a very simple syntax so can be easily learned

**24) Is JSON markup language?**

JSON is like XML in that it is used to structure data in a text format and is commonly used to exchange data over the Internet. JSON is not a markup language. JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write.

**25) What is JSON Value?**

A JSON value can be an object, array, number, string, true, false, or null.

**26) What is a JSON parser?**

JSON parser to parse JSON object and MAINTAIN comments. By using JSON, when receiving data from a web server, the data should be always in a string format. We use JSON.parse() to parse the data and it becomes a JavaScript object.

**27) Which browser provides native JSON support?**

All modern browsers support native JSON encoding/decoding (Internet Explorer 8+, Firefox 3.1+, Safari 4+, and Chrome 3+). Basically, JSON.parse(str) will parse the JSON string in str and return an object, and JSON.stringify(obj) will return the JSON representation of the object obj.

**28) What is the difference between JSON parse and JSON Stringify?**

JSON.stringify() is to create a JSON string out of an object/array. They are the inverse of each other. JSON.stringify() serializes a JS object into a JSON string, whereas JSON.parse() will deserialize a JSON string into a JS object.

**29) What is the use of JSON Stringify?**

The JSON.stringify() method converts a JavaScript value to a JSON string, optionally replacing values if a replacer function is specified, or optionally including only the specified properties if a replacer array is specified.

**30) What is serialization in Javascript?**

The serialize() method creates a URL encoded text string by serializing form values. You can select one or more form elements (like input and/or text area), or the form element itself. The serialized values can be used in the URL query string when making an AJAX request.

**31) What is toJSON() method in JOSN?**

The toJSON() method returns a string representation of the Date object.

**32) What is serialization and deserialization in JSON?**

JSON is a format that encodes objects in a string. Serialization means to convert an object into that string, and deserialization is its inverse operation. When transmitting data or storing them in a file, the data are required to be byte strings, but complex objects are seldom in this format.

**33) Why do we use JSON in PHP?**

A common use of JSON is to read data from a web server, and display the data in a web page. This chapter will teach you how to exchange JSON data between the client and a PHP server.

#### 34) What developers preferred to use JSON over XML?

**Answer:**  
The advantages are as below:

* JSON is faster and lighter than [XML](https://www.educba.com/xml-interview-questions/).
* JSON has typed objects whereas in XML objects are typically less.
* In JSON, there are different object types like integer, string, array etc. whereas in XML there is only one object type that is String only.
* JSON data can be easily available or accessible as JSON object using in JavaScript but in XML data needs to be parsed and allocated to variables using APIs.
* In JSON, retrieving the values is as simple as reading it from the property of the object from the javascript code.

#### 35) Explain JSON-RPC and its features?

JSON-RPC is referred to as a simple remote procedure call. It uses a lightweight JSON format. It is similar to XML-RPC but it is not using the XML format. It uses the java implementation JSON-RPC protocol. There are some features of the same like asynchronous communications, transparently maps Java Objects to [javascript objects](https://www.educba.com/javascript-objects/). It is a lightweight protocol. It calls dynamically server side java methods from JavaScript DHTML web applications. There is no page reloading happen for the same. It supports all browsers like internet explorer, Mozilla Firefox, safari, opera, and it uses the J2EE security model with session specific exporting of objects.

#### 36) Explain Newtonsoft in JSON?

Newtonsoft is referred to as the framework which is mainly used in the .net framework for performing the operations with JSON. It is also called as Json.net. There are a lot of features using Newtonsoft like it enables the user to parse, create, modify and query the JSON using its internal framework. It is simple and easy to use. It enables the user to serialize and de serialize any object with JSON serializer. It is faster than other serializers. It supports the conversion from XML to JSON and vice versa. Its syntax is simple and provides an easier way to query the JSON. It is a free and open source. To convert the data into JSON structure, a creation of an object is required to store data and once the object has been created then we can store the variables and keys in an object. After storing data in the object then we can serialize that data that is how serialization is done and de-serialization is reverse of it.Remaining Time -9:25

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**[7) What are different ways to create objects?](https://www.onlineinterviewquestions.com/json-interview-questions/" \l "collapseUnfiled7)**

* object literals
* Object.create
* constructors

**[38) What is the default value of a constructor’s prototype?](https://www.onlineinterviewquestions.com/json-interview-questions/" \l "collapseUnfiled8)**

A plain, empty object that derives from Object.prototype is the default value of a constructor’s prototype

**[39) What is the difference between JSON and JSONP?](https://www.onlineinterviewquestions.com/json-interview-questions/" \l "collapseUnfiled10)**

* **JSON:** JSON is a simple data format used for communication medium between different systems
* **JSONP:** It is a methodology for using that format with cross-domain ajax requests while not being affected by same origin policy issue.

**[40) What are natively supported JSON types?](https://www.onlineinterviewquestions.com/json-interview-questions/" \l "collapseUnfiled13)**

Following data types are natively supported in JSON.

* **Numbers**: Integer, float or Double
* **String**: string of Unicode characters, must be rapped into double quotes “”
* **Boolean**: True or false
* **Array**: ordered list of 0 or more values
* **Objects** : An unordered collection key/ value pairs
* **Null**: An Empty value

**[41) What is BSON?](https://www.onlineinterviewquestions.com/json-interview-questions/" \l "collapseUnfiled14)**

BSON is the superset of JSON, which used by [MongoDB](https://www.onlineinterviewquestions.com/mongodb-interview-questions/).BSON supports the embedding of documents and arrays within other documents and arrays. BSON also contains extensions that allow representation of data types that are not part of the JSON spec.

**[42) How to convert an Object into JSON? What is the full syntax of JSON.stringify?](https://www.onlineinterviewquestions.com/json-interview-questions/" \l "collapseUnfiled15)**

**JSON.stringify** method is used to convert an Javascript Object into JSON.  
Syntax:

let json = JSON.stringify(value[, replacer, space])

1. **Why Do We Use Json?**

The JSON format is often used for serializing and transmitting structured data over a network connection. It is used primarily to transmit data between a server and web application, serving as an alternative to XML.

**44) What Is The Difference Between Xml And Json?**

The fundamental difference, which no other answer seems to have mentioned, is that XML is a markup language (as it actually says in its name), whereas JSON is a way of representing objects (as also noted in its name). This is what makes markup languages so useful for representing documents.

**45) Why Json Format Is Better Than Xml?**

JSON and XML used different formats. When compared both JSON is easy to write and use it applications then XML. The XML format can also be determined by the XML DTD or XML Schema (XSL) and can be tested.

The JSON a data-exchange format which is getting more popular as the JavaScript applications possible format. Basically this is an object notation array. JSON has a very simple syntax so can be easily learned.

**46) What Is Json Array?**

An array structure is a pair of square bracket tokens surrounding zero or more values. An array is an ordered collection of values. An array begins with [ (left bracket) and ends with ] (right bracket). Values are separated by , (comma). The values are separated by commas. The JSON syntax does not define any specific meaning to the ordering of the values. However, the JSON array structure is often used in situations where there is some semantics to the ordering.

**47) Is Json Is A Language?**

JSON is a data format. It could be classified as a language, but not a programming language. Its relationship to JavaScript is that it shares its syntax (more or less) with a subset of JavaScript literals.

**) What are some popular JSON tools?**The popular JSON tools are as follows -

* JSONLint - https://jsonlint.com
* JSON Editor Online - https://jsoneditoronline.org/
* JSON Minifier Tool - https://www.browserling.com/tools/json-minify
* JSON to XML Converter - https://codebeautify.org/jsontoxml
* JSON Formatter - https://jsonformatter.curiousconcept.com/

**48) What is JSON used for?**

JSON is used for communication between server side technologies and mobile app or website.

**49) What is the rule for writing JSON?**

* JSON is the collection of key and value pair separated by the comma.
* Key and value are separated by the colon (:).
* Square brackets are used to store JSON array.
* Curly brackets are used to hold JSON objects.

**50) JSON vs. XML?**

* XML requires XML parser to parse it. JSON is parsed with the help of JavaScript functions.
* XML is heavy and verbose. JSON is short and lightweight.
* File extension of XML data is .xml. File extension of JSON data is .json.
* XML is document based. JSON is data based.
* JSON is simple to read, write and understand. XML is less simple to read, write and understand.
* Array is supported by JSON. Array is not supported by XML.
* JSON stands for JavaScript Object Notation. XML stands for Extensible Markup Language.

**51) What is MIME type for JSON data?**

MIME type is application/json.