1.Javascript vs NodeJS:

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| Javascript | NodeJS |
| 1. Javascript is a programming language that is used for writing scripts on the website | 1. NodeJS is a Javascript runtime environment |
| 2. Javascript can only be run in the browsers | 2. NodeJS code can be run outside the browser |
| 3. It is basically used on the client-side | 3. It is mostly used on the server-side |
| 4. Javascript is capable enough to add HTML and play with the DOM | 4. Nodejs does not have capability to add HTML tags |
| 5. Javascript is used in frontend development | 5. Nodejs is used in server-side development |
| 6. Javascript can run in any browser engine as like JS core in safari and Spidermonkey in Firefox | 6. Nodejs can only run in V8 engine of google chrome |

# 2.(5 Points) -So how does the browser actually render a website:

# 1.Tokenizer

# Start tag:

# < div> 🡺here < represents Tag Open,div is Tag Name,> represents Tag Close.

# End Tag:

# </div> 🡺 here </ represents Close Tag Open,div is Tag Name,> represents Tag Close.

# 2.Reentrant:

# It means parsing process can be interrupted.

# Flow is

# Tokenizer--🡪Tree Construction--🡪DOM🡪Script Execution🡪again to Tokenizer

# 3.DOM+CSSOM:

# It combines the two object models,style resolution.

# 4.Render tree has multiple trees:

# a.RenderObjects.

# b.RenderStyle.

# c.RenderLayers.

# d.Line Boxes.

# 5.Not in the rendertree:

# Non-visual elements:

# 1.head.

# 2.Script.

# 3.Title etc.

3. Execute the below code and write your description in txt file:

1. typeof(1)-Number
2. typeof(1.1)-Number
3. typeof('1.1')-String
4. typeof(true)-Boolean
5. typeof(null)-Object
6. typeof(undefined)-undefined
7. typeof([])-Object
8. typeof({})-Object
9. typeof(NaN)- Number

4.What is Prototype:

A prototype is an early sample, model or release of a product created to test a concept or process. Typically, a prototype is used to evaluate a new design to improve the accuracy of analysts and system users. It is the step between the formalization and the evaluation of an idea.