

Notes

- JS - was meant to run only in the browser
- Following are some JS engines that are present in modern day browser to run JavaScript:
 - Google Chrome - V8 Engine.
 - Mozilla Firefox - SpiderMonkey.
- Node was developed by **Ryan Dahl** to run JS outside of the browser.
- Node = V8 Engine/SpiderMonkey + Inbuilt Node Modules
- Node is a Runtime environment, that allows JS to run outside of browsers in local machines as well.

Now lets see some quick examples to understand this concept of runtime environment:

- Playstation games can run in a play station console only.



- I can make tandoori roti in a tandoor only.



CJS

```
//for importing  
const x = require("module")  
//for exporting  
module.exports = x
```

- Common JS method is used to import or export any Node module.
- We are not using ES6 method of importing and exporting because almost all the industries in the market use the CJS method only, and we have to align with the same as most of the resources present on web also prefers the same.

Let us create two file in vs code `index.js` & `data.js`

- **Index.js File**

```
const {sum, sub, pro, div}=require("./data.js")  
  
sum(10,10)  
sub(20,5)  
pro(12,12)  
div(10,5)
```

- **data.js File**

```
const sum=(a,b)=>{  
    console.log(a+b);  
}  
  
const sub=(a,b)=>{  
    console.log(a-b);  
}  
  
const pro=(a,b)=>{  
    console.log(a*b);  
}  
  
const div=(a,b)=>{
```

```
    console.log(a/b);
}

module.exports={
  sum,
  sub,
  pro,
  div
}
```

- Now, when we run `index.js` by the help of node in our local machine then following is going to be the output

```
//20
//15
//144
//2
```

Node REPL

- Read ⇒ Evaluate ⇒ Print ⇒ Loop
- Explore this by your own, Do Experiments.

JavaScript is....

- Single Threaded.
- Asynchronous.
- Dynamically Typed.
- Concurrent.

Note: Go through the Documentation of node as well, and experiment yourself, specially try some of the inbuilt node modules.



Documentations

Node ⇒ <https://nodejs.org/dist/latest-v18.x/docs/api/>

Specifically Go through the following:

1. **File System** ⇒ <https://nodejs.org/dist/latest-v18.x/docs/api/fs.html>
2. **DNS** ⇒ <https://nodejs.org/dist/latest-v18.x/docs/api/dns.html>
3. **Path** ⇒ <https://nodejs.org/dist/latest-v18.x/docs/api/path.html>
4. **Crypto** ⇒ <https://nodejs.org/dist/latest-v18.x/docs/api/crypto.html>
5. **HTTP** ⇒ <https://nodejs.org/dist/latest-v18.x/docs/api/http.html>
6. **Stream** ⇒ <https://nodejs.org/dist/latest-v18.x/docs/api/stream.html>