Asynchronous and Synchronous

* Synchronous means → tasks will perform one time

→ means that at one time task wille perform

→ Users — funtion

If user function work then another task perform

Product → task perform second

→ An Asynchronous means → Second task can not wait from one task.

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One
for example Synchronous

```
console.log("Start")
Console.log("Noje")
Console.log("Programming")
```

→ this one time Perform →
→ If task assign then second task perfom
→ then third task Perform

and output will be
→ Start
→ Nojle
→ Programming

then Asynchronous Programing means Second task can not wait for first task perform.

for example

```
Console.log('Start')
setTimeout(() => {
    console.log("Node js")
}, 2000)
Console.log('Java script')
```

→ first task comple
→ then 2nd task take time so that why then 3rd task will perform then 2nd task perform

this is the example of Asynchrones

→ basic example meas that at one time task will perform 2nd task wait form one 1st to comple

→ Serond task can not wait for first time this is called aschrony tion.

Impedant Point

How node js work internally

- what is call stack?
- what is node API?
- what is call Back Queue
- Example

① Architecture

① call back → defenetly work

② Node API

③ call back Que

these all Process is called Event loop

for example If we execute one funct. program basic

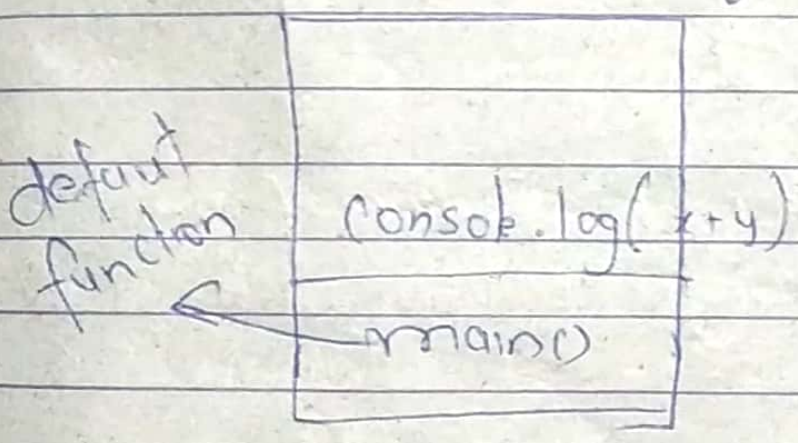
```
let x=1
let y= 2

Console.log( x+2)
```

for example

→ call stack
It store all the function registery

→ Which function will execute first



Out Sum is 3

then, main()

for example of Node API

Code

```
Consde. log('Hell')

Settimeout (() => {
        (console. log('Hi') }. 2000)

Set time out (() => {
        (console. log('Hello') }. 0)

Cons ole .log('Js')
```

→ Set timeout is not a part of JS, node JS

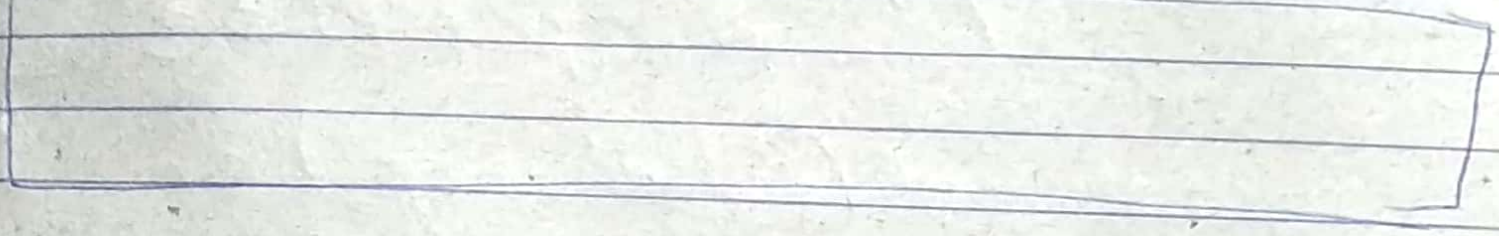
→ it inherit these properties from C then Why

→ it login for Node API

→ digram

console.log() console.log() main()		Set timeout(2sec) Set timeout(i)

callbackQue



→then

→ Set time out (one) in callback first

→ then Set time out (2) callback in queue

→ Express js is frame work for node js

→ Jus like Angular js is frame work

→ and Spring from Java frame that same as Express Js it a frame work of node Js.

→ By using we can get something and request something and response data etc.

→ for Express Js we use Package install Package of express Is

npm install express

→ this is the first step to connect with express js module

import module

① const express = require('express')

- const app = express() → executable module

```
app.get('/', (req, resp) => {
    resp.send('
        console.log('first page')
    })
app.listen(2000)
```

```
app.get('/', (req, resp) => {
    resp.send('first page')
})
app.listen(5000);
```

→ another second example of node js and express JS

① first import module

```
const express = require('express')
```

② second convert into executable mode

```
const app = express();
```

③ then call method get

```
app.get('/hello', (req, resp) => {
    resp.send('Second Page')
})

app.listen(5000);
```

Now task is connect with DB like mongo DB to connect with node js