**MERN Stack | Batch 1 - Day 1 Overview**

**Day 1 Agenda | Total Duration-2:11:48**

* Client Server
* Installing Node
* Reading and writing File
* Creating server

**Client Server:**

* When we send a request to a server and the server responds to it. Eg: the 404 error.
* Header:
  + It  is extra info which we send with request and comes with response.
  + Eg: Authorization Tokens.
* Status of the response:
  + It comes under response. It basically tells what kind of response the server has got.

**Node JS**

Node JS is a javascript runtime environment. It uses a chrome V8 engine.

**Benefits:**

* Js is called server side language only because of Node JS.

**How to Install Node Js:**

**Steps:**

1. Go to [nodejs.org/en/download](http://nodejs.org/en/download)
2. Depending on your OS download
3. Keep on going next next then accept everything and Install in your OS

*Note: It's not necessary to tic on Chocolatey*

To check if Node is install go to terminal and type

node -v

Type anything in index.js:

For eg:

console.log("Node it is!")

**How to run:**

node finename.js

*Here it will be:*

*node index.js*

**Module Package:**

Package is a collection of modules. It is a file with some code which you can use by importing. It can be in-built or user defined.

**Read and Write files:**

**Requires Fs module:**

Fs provide with 5 or 6 modules

It gives you function to read and write files with few in synchronous way and few asynchronous way

**Synchronous way:**

**Read File:**

const fs=require('fs');

const data=fs.readFileSync("./data.txt",{encoding:"utf-8"});//reads the file in utf-8 format

console.log(data);//prints the data

**Write File:**

const fs=require('fs');

fs.writeFileSync("./output.txt","Hello! I am an output");//writes in the file

console.log("file written");//prints the message

**Asynchronous Way:**

**Read File:**

const fs=require('fs');

fs.readFile("./data.txt",{encoding:"utf-8"},(err,data)=>{&nbsp;&nbsp;&nbsp;

// reads the file

//encoding:utf-8 give the output in utf-8 format

//err is for if there is any error in the file it will display error

&nbsp;&nbsp;console.log(data);//prints the data of the file

})

console.log("H")//to check it is in chronous way so it will print this first and the the data of the file

**Write File:**

const fs=require('fs');

fs.writeFile("./something.txt","Hello",(err)=>{&nbsp; //creates and writes in the file hello

&nbsp;&nbsp;console.log(err);//prints null as err message is asked to be printed

})

**Append in a file:**

const fs=require('fs');

fs.appendFile("./something.txt","I am just getting appended",(err)=>{ //addes the message in the text file and if any error prints the error

})

**Read from data.txt and write in output.txt:**

fs.readFile("./data.txt",{encoding:"utf-8"},(err,data)=>{&nbsp; //reads message from data.txt

fs.writeFile("./output.txt",data,(err)=>{ //writes in output.txt

console.log(err); //prints null as err is asked to print

})

})

**How to Create a server:**

It requires http module

**htttp module:**

http module is used to create server and handle request

const http= require('http');//store http in module in a constant

const server=http.createServer((request,response)=>{ //create a server and handles all the request

response.end("I am up"); // give the message in the particular ip addres you have names

});

//to start and mention its properties

server.listen("3000","127.0.0.1",()=>{

console.log("Started"); //gives the message in terminal after running

});