



A large, abstract graphic in the background consists of numerous white and light grey triangles of varying sizes, creating a sense of depth and perspective.

Node.js, Express.js &
MySQL

Using Command line

- ❖ The Command line is generally used by power users to quickly move between directories
- ❖ In windows its common to use the PowerShell
- ❖ We will be using it for:
 - ❖ Navigating without using out GUI
 - ❖ Running programs

Commands

- ❖ dir or ls: print out current directory information
- ❖ cd: stands for change directory
 - ❖ cd.. : moves you back a directory
 - ❖ cd dirName : moves you to the selected directory
 - ❖ cd\ moves you to C:
 - ❖ New-Item -Name “File Name” : optional : -ItemType “directory”//this will be needed for adding files
 - ❖ Control + C
- ❖ <https://devblogs.microsoft.com/scripting/table-of-basic-powershell-commands/>

What is node.js??

- ❖ Node.js is a backend version of JavaScript.
- ❖ JavaScript on its own cannot interact with our hardware directly, so people developed some low level functionality called node.js
- ❖ Node.js is written in C, C++ and of course JavaScript

Step By Step

- ❖ Create folder called “Intro-To-Node”
- ❖ Create new file server.js
- ❖ Open with vs code
- ❖ Console.log(hello world)
- ❖ Run with node

Node REPL

- ❖ READ, EVALUATE, PRINT, LOOP
- ❖ We can use our PowerShell and write code directly by typing node pressing enter then writing the code

Node.js Libraries

- ❖ Node comes with preinstalled libraries <https://nodejs.org/api/>
- ❖ We are going to use the file system module as a simple demonstration of what the libraries can do
- ❖ <https://nodejs.org/api/fs.html>

npm

- ❖ Npm is a package manager for external modules
- ❖ These are made by anyone, even you could make them!
- ❖ They make life very easy when using node
- ❖ NPM stand for Node Package Manager
- ❖ To start:
 - ❖ Type npm init

NPM

- ❖ <https://www.npmjs.com/>
- ❖ Look up Superhero names
- ❖ Go to first option
- ❖ Make a random super hero name generator
- ❖ Look up Supervillain names
- ❖ Go to first option
- ❖ Make a random super villain name generator

Express JS

- ❖ What is express? It's a framework, that does of the heavy lifting
- ❖ What is a framework? It's a foundation that we can build software on, its like you buy some Lego, so you can build something, now instead manufacturing the plastic, making the moulds and designing a project, you can buy a star wars set that will allow you to make a super awesome toy without all the heavy lifting.

Making a server

- 1) Create a new Directory called my-express-server
- 2) Cd into the directory
- 3) Inside, create a new file called server.js
- 4) Initialize npm with server.js as start point
- 5) Open with VS code

Making a Server

- ❖ Npm Install express
- ❖ <https://expressjs.com/en/starter/hello-world.html>
- ❖ We are going to make a variable express that will require express
- ❖ Then a variable called app which will bring in the express function
- ❖ Then we will listen to a port for any HTTP requests, generally 3000
- ❖ What is a port? Its like a channel or frequency that we can tune our server to
- ❖ Like if I turn my radio to 107 fm, then I will pick up any frequencies on that channel

Localhost

- ❖ Localhost:3000 is the local domain we are using.
- ❖ This is our local server

Get Request

- ❖ Our server isn't sending or receiving anything
- ❖ For this we need a get request
- ❖ Above the app.listen() we are going to create an app.get()
- ❖ Get("/") this is the rout directory
- ❖ We add a call back function with request and respond

Get Request

- ❖ What are request and response?
- ❖ That are objects that contain HTTP data
- ❖ Request requests HTTP data
- ❖ Response sends back the data
- ❖ We can use `response.send("words")` for that
- ❖ Its best practice to write `res, req`

Nodemon

- ❖ Instead of restarting your server every time we can install nodemon package
- ❖ Npm install -g nodemon
- ❖ -g mean global so you don't have to install it again
- ❖ You may have to enter you computers password

Routs

- ❖ We can use get(“/”)
- ❖ Or we can use get(“/contact”), this is now a new page
- ❖ Localhost:3000/contact
- ❖ Make a new rout called /about with a short bio about who you are
- ❖ Make a new rout called /hobbies with a short unordered list

Calculator

- 1) Create a new Directory called calculator
- 2) Cd into the directory
- 3) Inside, create a new file called server.js
- 4) Initialize npm with server.js as start point
- 5) Open with VS code
- 6) Npm install express