

# Node JS

By

MSIT

# What is Node.JS

- Node.js is an open source **server environment**.
- Node.js allows you to run **JavaScript** on the server.

- Node.js is an open source server environment
- Node.js is free
- Node.js runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
- Node.js uses JavaScript on the server

- A common task for a **web server** can be to open a file on the **server** and **return** the content to the client.
- Here is how PHP or ASP handles a file request:
- **Returns** the content to the client.
- Ready to handle the next request.

- Node.js eliminates the waiting, and simply continues with the next request.
- **Node.js** runs **single-threaded**, non-blocking, asynchronously programming, which is very memory efficient.

# What Can Node.js Do?

- **Node.js** can generate dynamic page content
- Node.js can **create, open, read, write, delete,** and close **files** on the server
- Node.js can collect form data
- Node.js can **add, delete, modify** data in your **database**

# What is a Node.js File?

- Node.js files contain tasks that will be executed on certain events
- A typical event is someone trying to access a port on the server
- Node.js files must be initiated on the server before having any effect
- Node.js files have extension ".js"

```
C:\Users\Your Name>_
```

## Initiate the Node.js File

The file you have just created must be initiated by Node.js before any action can take place.

Start your command line interface, write `node myfirst.js` and hit enter:

Initiate "myfirst.js":

```
C:\Users\Your Name>node myfirst.js
```

Now, your computer works as a server!

If anyone tries to access your computer on port 8080, they will get a "Hello World!" message in return!

Start your internet browser, and type in the address: <http://localhost:8080>



# What is a Module in Node.js?

- Consider modules to be the same as JavaScript libraries.
- A set of functions you want to include in your application.
- **Built-in Modules**
- Node.js has a set of built-in modules which you can use without any further installation.
- Look at our [Built-in Modules Reference](#) for a complete list of modules.

# Include Modules

## Include Modules

To include a module, use the `require()` function with the name of the module:

```
var http = require('http');
```

Now your application has access to the HTTP module, and is able to create a server:

```
http.createServer(function (req, res) {  
  res.writeHead(200, {'Content-Type': 'text/html'});  
  res.end('Hello World!');  
}).listen(8080);
```

# Create Your Own Modules

```
var http = require('http');
var dt = require('./myfirstmodule');

http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.write("The date and time is currently: " + dt.myDateTime());
  res.end();
}).listen(8080);
```

http://localhost:8080

The date and time are currently Mon Apr 12 2021 08:22:06 GMT+0530 (India Standard Time)

# How to run

Initiate demo\_module.js:

```
C:\Users\Your Name>node demo_module.js
```

If you have followed the same steps on your computer, you will see the same result as the example:

<http://localhost:8080>

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# First Program

```
var http = require('http');

http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/plain'});
  res.end('Hello World!');
}).listen(8080);
```

http://localhost:8080

Hello World!

# Node and its advantages & MySQL

## Node.js Tutorial

### Node.js HOME

Node.js Intro

Node.js Get Started

Node.js Modules

Node.js HTTP Module

Node.js File System

Node.js URL Module

Node.js NPM

Node.js Events

Node.js Upload Files

Node.js Email

## Node.js MySQL

MySQL Get Started

MySQL Create Database

MySQL Create Table

MySQL Insert Into

MySQL Select From

MySQL Where

MySQL Order By

MySQL Delete

MySQL Drop Table

MySQL Update

MySQL Limit

MySQL Join

# Node.js MongoDB

## Node.js MongoDB

MongoDB Get Started

MongoDB Create

MongoDB Create

MongoDB Insert

MongoDB Find

MongoDB Query

MongoDB Sort

MongoDB Delete

MongoDB Drop C

MongoDB Update

MongoDB Limit

MongoDB Join

## Raspberry Pi

RasPi Get Started

RasPi GPIO Introduction

RasPi Blinking LED

RasPi LED & Pushbutton

RasPi Flowing LEDs

RasPi WebSocket

RasPi RGB LED WebSocket

RasPi Components

The end