# Node.js Learning Notes

## Introduction

Node.js is an open-source, cross-platform JavaScript runtime environment that allows developers to run JavaScript code on the server side.

It is built on the V8 JavaScript engine (the same engine that powers Google Chrome).

## LESSON 1: Understanding Modules

## 1.Core Modules

fs: For file system operations (e.g., reading/writing files).

var fs = require('fs');

http: For creating web servers and handling HTTP requests.

var http = require('http');

os: For interacting with the operating system (e.g., retrieving system information).

const os = require("os"); //os module

console.log(os.userInfo());

console.log(os.type());

console.log(os.platform());

console.log(os.homedir());

path: For working with file and directory paths.

const path = require("path"); //path module

console.log(path.dirname(\_\_filename)); //file name

console.log(path.basename(\_\_filename));

console.log(path.extname(\_\_filename));

console.log(path.parse(\_\_filename));

## 2. Importing and Exporting with require and module.exports

**require()** is used to import built-in or custom modules.

const {add,subtract,multiply,divide} = require('./math')

## 3.Events Loop

An event loop is something that pulls stuff out of the queue and places it onto the function execution stack whenever the function stack becomes empty.

The event loop is the secret by which JavaScript gives us an illusion of being multithreaded even though it is single-threaded.

## 4.Events Module

Node.js has a built-in module, called "Events", where you can create-, fire-, and listen for- your own events.

var events = require('events');

var eventEmitter = new events.EventEmitter();

eg

var events = require('events');

                var eventEmitter = new events.EventEmitter();

                //Create an event handler:

                var myEventHandler = function () {

                  console.log('I hear a scream!');

                }

                //Assign the event handler to an event:

                eventEmitter.on('scream', myEventHandler);

                //Fire the 'scream' event:

                eventEmitter.emit('scream');