Node JS
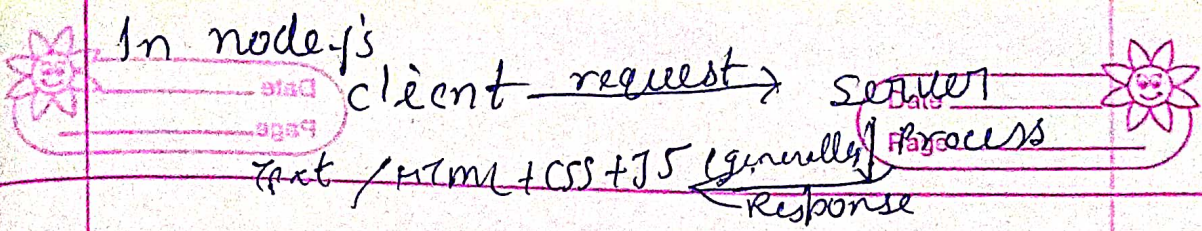
* It main feature is to provide rest service.
* Node.js is a cross-platform runtime environment and library for running JS application outside the browser. It is used for creating server side and networking web application.
* It is a platform built on Chrome's JS runtime for easily building fast and scalable network application.
* It uses an event-driven, non-blocking I/O model that makes it lightweigh and efficient.
* ~~It is a back end programming language uses JS.~~
* Used to make chat application, video-call application and fast executed application

Features

* built on Google Chrome's V8 JS engine
* I/O is Asynchronous and event driven.
* Single threaded
* It doesn't wait for responds from server while it is always ready to a new request,
* It is an open source server environment, free, uses JS on the server.
* Asynchronous Programming

What can Node.js Do?

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

You can run node.js files in cmd using `node _ filename (both)`

In node.js

client ——request→ server

Text / HTML + CSS + JS (generally) Process

←————— Response

What is a Node.js File?

* Node.js files contain task 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

REPL (Read Eval Print & Loop)

Read the input from user and store it in a memory | Evaluate it and process | Print the output | again start the same procedure

* You can start it, by enter 'node' command in cmd.
* You can use it same way as console in google chrome or many more browser
* You can exit from it, using Ctrl + C or '.exit' command

* Module in Node.js are JS libraries that contains a set a function you want to include in your project.
* To include a module, use the require() function with the name of module.
  Syntax- var obj_name = require("module name");
  Ex- var http = require("http");
       var js = require("js");
* Node.js provides same built-in module as http.js, url. If you want to use another one module you have to install it by command "npm install module-name"

Create Your own module — You can also create
your own module by writing some code as
methods and properties and use "exports" keyword
to make methods and properties available outside
the module. You must require it in your
code file using require() function.
Ex- var dt = require ("./my first module")

NPM (Node Package Manager)

A package in node.js contains all the files
you need for a module.
You can download a package using command-
npm install "package name"
npm install upper-case .html

To initialize a directory - npm init

Remember it-
* Node JS is not a programming language
and not a framework. It provides
an event-driven, not-blocking (asynchronous)
I/O and cross-platform run time environm
for building highly scalable server side applica
using java script.
* It is runtime environment
* Its Express is a popular framework that works
on top of Node.js web server functionality to
simplify its APIs and add helpful new features.
* It used on frontend and backend.