**What is Node.js?**

* Node.Js Is a runtime built on chrome’s V8 javascript engine
* Javascript running on the server
* Used to build powerful, fast & scalable web applications
* Uses an event-driven, non-blocking I/O model

**Non-blocking I/O :**

* Works on a single thread using non-blocking I/O calls
* Supports tens of thousands concurrent connections
* Optimizes throughput and scalability in web applications with many I/O operations
* This makes Node.js extremely fast and efficient

**Event Loop:**

* Single-threaded
* Supports concurrency via events and callbacks
* Event Emitter class is used to bind events and event listeners

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Event handler events event loops event handlers

**What can we Build with Node.js?**

* Rest APIs & Backend applications
* Real-time services (chat , games, etc)
* Blogs, CMS, social applications
* Utilities & Tools
* Anything that is not CPU-intesive

**NPM :**

* Node.js package manager
* Used to install node programs/modules
* Easy to specify and link dependencies
* Modules get installed into the “node\_modules” folder

**npm install express**

**npm install –g express**

**populr Modules:**

**Express**: web development framework

**Connect:** Extensible HTTP server framework

**Socket.io:** Server side component for web sockets

**Pug/jade:** template engine inspired by HAML

**Mongo/Mongoose**: Wrappers to interact with MangoDB

**Coffee-Script:** CoffeScript compiler

**Redis:** redis client library

Package.json file:

* Goes in the root of your package/application
* Tells npm how your package is structured and what to do to install it.