

NODE JS

Wednesday, March 16, 2022 2:34 PM

- NodeJS is a runtime environment for running JavaScript code outside web browser.

\$ node app.js

What can we do with NodeJS?

1. We can write a "hello world" application.
2. We can write small scripts to **automate our task**
 - Push files to git?
 - Delete unwanted files from the disk
 - Do some recurring works involving your file system
 - Manage your project's backup and deployment to the server
3. Write test cases for our JavaScript logic
4. Create Network applications like
 - a. HTTP Server/client
 - b. Web Server/client
 - c. Logic to fetch data from the server
 - d. Logic to automatically generate html files
5. Any application not involving browser directly
 - a. We can create applications that can run in browser.

Server Side Application

- We can use NodeJS to create application that can
 - Listen for incoming HTTP Request
 - Fetch data from data base based on request
 - Create HTML pages
 - Send the page to the client as response

Another Major Reason to use NodeJS is NPM (Node Package Manager)

- Why do you use smart phone?
 - To Make phone call?
 - Even non-smart phone can do it.
 - Web browsing.
- Which is the most important app in your phone?
 - **Playstore.**
 - **This is the main reason for having a smart phone!**
 - **This is what makes your phone smart and extensible**
 - **You get everything else from here!**

NPM is the 'playstore' of NodeJS ecosystem

- **NPM is a like a huge market place for components needed for web application development**
- **It includes libraries like**
 - **JavaScript libraries**
 - **Browser Libraries**
 - React
 - Angular
 - Vue
 - JQuery
 - **Server Side libraries**
 - Express
 - Mongo
 - **Testing library**
 - Jest
 - Karma
 - **Executable libraries**
 - **Project Buiding tools like**
 - Webpack
 - Gulp
 - Grunt
 - **Transpilers like**
 - Typescript
 - Babel
 - **Runtimes like**
 - Liveserver
 - Nodemon
 - **Testing Frameworks**
 - Karma

- Jasmine
- Jest
- Non Javascript libraries
 - CSS
 - Bootstrap
 - Font-awesom
- ... (More than 6,50,000 components existed in 2018)
- For more details visit <https://npmjs.org>

NPM Also provides a simple project management structure

- All projects we create today with node ecosystem, we create as an npm project
 - Including
 - Frontend projects like
 - React
 - Angular
 - Mobile development projects like
 - Flutter
 - ReactNative
- A Node project is simply a folder with a special `package.json` and `node_modules` folder

NPM Project

1. Create a project folder

The screenshot shows a Windows File Explorer window on the left, displaying a folder named 'simple-node-project' with a 'package.json' file. A blue arrow points from the 'package.json' file to the terminal window on the right. The terminal window shows the command 'npm init' being executed, followed by a series of prompts for package name, version, description, entry point, test command, git repository, keywords, author, and license. The terminal also shows the resulting 'package.json' file content.

```

D:\MyWorks\Corporate\202203-infogain-react\simple-node-project>npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.

See `npm help init` for definitive documentation on these fields
and exactly what they do.

Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.

Press ^C at any time to quit.
package name: (simple-node-project)
version: (1.0.0)
description:
entry point: (index.js)
test command:
git repository:
keywords:
author: Vivek Dutta Mishra
license: (ISC)
About to write to D:\MyWorks\Corporate\202203-infogain-react\simple-node-proje
{
  "name": "simple-node-project",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "Vivek Dutta Mishra",

```

- If you want to accept all default you have a shortcut

\$ npm init --y

IMPORTANT!

50% + People use NodeJS, not because they want to write non-browser based application, but because they want to use NPM which is a part NodeJS