

Node JS

Learning Node JS

PRAVEEN NAIR

Top Backend Technologies

Node.js - is an open-source, cross-platform JavaScript framework that is used to build server-side and networking applications.

Django - is an open-source framework based on Python. It is a web framework from the server's side. Django follows the Model Template View (MTV) architecture.

Spring Boot - is an open-source web framework based on Java that allows developers to build production-grade and standalone applications.

ASP.NET - is an open source web framework, created by Microsoft, for building modern web apps and services that run on macOS, Linux, Windows, and Docker.

Laravel - is a PHP framework that provides a built-in user interface, flexibility, API support, creativity, and an extensive range of various libraries that help in the development process of secure web applications

Introduction to Node JS

Node.js was invented for server side scripting and uses JavaScript.

Node.js is free and open source server environment.

Node.js runs on various OS(Windows, Linux, etc.)

Node.js continues with the next request in case current request is delayed.

Node.js can collect data submitted by front end users.

Node.js can add, delete, modify data in your database

Visit <https://nodejs.org/en> to download and install node js

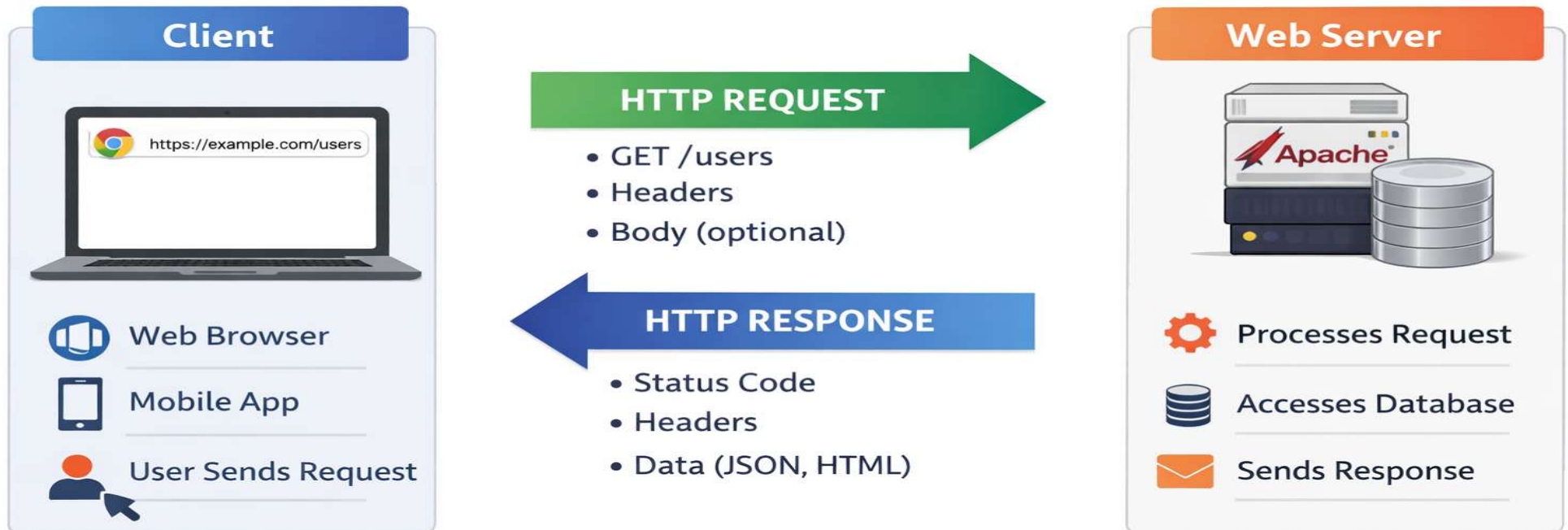
Introduction to Express JS

Express.js is fast and minimalist web framework for Node.js. An Express application is essentially a series of middleware function calls.

Express.js has powerful models for URL routing (matching an incoming URL with a server function), and handling HTTP requests and responses.

By making XMLHttpRequests (XHRs) or GETs or POSTs from your React.js front end, you can connect to Express.js functions that power your application.

Request-Response Cycle



Create and setup server

Open terminal and type the following command

`npm init -y` //this will create package.json file

Add following line in package.json, below name attribute

`"type": "module",`

Create `.gitignore` file (Add `/node_modules` and `.gitignore` in the file)

`npm install express`

index1.js - creating web server

```
import express from 'express'
```

```
const app = express()
```

```
app.listen(8080)
```

```
.....
```

<http://localhost:8080>

Cannot GET /

API testing tool

Postman - One of the most popular API testing platforms.

index2.js – req/res object

```
import express from "express";  
const app = express();  
app.listen(8080, () => console.log("Web Server has been started"));  
app.get("/", (req, res) => {  
  console.log(req.url);  
  console.log(req.method);  
  console.log(req.body);  
  res.send("response from server");  
});
```

index3.js – multiple routes

```
import express from "express";
const app = express();
app.listen(8080, () => console.log("Web Server has been started"));
app.get("/", (req, res) => {
  console.log(req.url);
  res.send("response from server for route /");
});

app.get("/home", (req, res) => {
  console.log(req.url);
  res.send("response from server for route /home");
});
```

index4.js – req.params

```
app.get("/:name", (req, res) => {  
  res.send(req.params.name);  
});  
app.get("/:name/:age", (req, res) => {  
  res.send(req.params.name + req.params.age);  
});  
app.get("/name/:name/age/:age", (req, res) => {  
  res.send(req.params.name + req.params.age);  
});
```

index5.js – req.headers

```
app.get("/", (req, res) => {  
  console.log(req.headers);  
  console.log(req.headers.host);  
  console.log(req.headers.authorization);  
  res.send("response from server for route /");  
});
```

index6.js – req.query

//http://localhost:8080/?name=amy&age=23

```
app.get("/", (req, res) => {  
  res.send(req.query.name+req.query.age);  
});
```

index7.js – res.json

```
app.get("/", (req, res) => {  
  const user = {  
    name: "John",  
    email: "john@gmail.com",  
    role: "student",  
  };  
  res.json(user);  
});
```

index8.js – res.json – array of objects

```
const users = [  
  {id:1,name: "John",email: "john@gmail.com",role: "student"},  
  {id:2,name: "Admin",email: "admin@gmail.com",role: "admin"},  
];  
  
app.get("/", (req, res) => {  
  res.json(users);  
});
```