1.5 Multiprocessing in NodeJS



This section will guide you to:

* Create a JavaScript project in your IDE
* Write a program in NodeJS to show clustering

This lab has two subsections, namely:

1.5.1 Writing a program in NodeJS to create a master process that retrieves the number of CPUs and forks a worker processess for each CPU

1.5.2 Pushing the code to your GitHub repositories

*NodeJS is already installed in your lab. (Refer MEAN: Lab Guide - Phase 3)*

**Step 1.5.1:** Writing a program in NodeJS to create a master process that retrieves the number of CPUs and forks a worker processess for each CPU

* Open a terminal
* Install cluster and OS modules using the following commands:

*npm install os*

*npm install cluster*

* Create a folder using **mkdir *Demo1*** command
* Open Visual Studio Code and create a new file
* Add the following code to app.js.

const cluster = require('cluster');

const http = require('http');

const numCPUs = require('os').cpus().length;

if (cluster.isMaster) {

masterProcess();

} else {

childProcess();

}

function masterProcess() {

console.log(`Master ${process.pid} is running`);

for (let i = 0; i < numCPUs; i++) {

console.log(`Forking process number ${i}...`);

cluster.fork();

}

process.exit();

}

function childProcess() {

console.log(`Worker ${process.pid} started and finished`);

process.exit();

}

* *Open the terminal and run the following command:*

*node app.js*

**Output:**

*Master 6328 is running*

*Forking process number 0...*

*Forking process number 1...*

*Forking process number 2...*

*Forking process number 3...*

**Step 1.5.2:** Pushing the code to your GitHub repositories

Open your command prompt and navigate to the folder where you have created your files.

cd <folder path>

Initialize your repository using the following command:

git init

Add all the files to your git repository using the following command:

git add . 

Commit the changes using the following command:

git commit . -m “Changes have been committed.”

Push the files to the folder you initially created using the following command:

git push -u origin master