**[Week 3: Node JS](https://classes.capaciti.org.za/courses/course-v1:CITI+CAP004+2021/course/" \l "block-v1:CITI+CAP004+2021+type@chapter+block@3c8e9e49c6e043f4805baf68c46eac0d)** [**–**](https://classes.capaciti.org.za/courses/course-v1:CITI+CAP004+2021/course/#block-v1:CITI+CAP004+2021+type@sequential+block@7ed270f6790f48538b8908dc01cdf40f)  **What is Node JS?**

Google chrome's V8 – JavaScript engine

Listen to network traffic

Access files on your local

Listen to http

Send back files

Access databases

Node.js is an open-source, cross-platform JavaScript runtime environment that allows developers to execute JavaScript code outside of a web browser. It is built on the V8 JavaScript engine developed by Google and is designed to be efficient and lightweight, making it well-suited for building scalable and high-performance network applications.

Key features and characteristics of Node.js include:

* Non-blocking I/O: Node.js is designed around an event-driven, non-blocking I/O model, which means that it can handle many simultaneous connections and perform tasks asynchronously. This makes it particularly suitable for building real-time applications like chat applications or online gaming.
* Server-side scripting: Node.js is often used for server-side scripting, enabling developers to build web servers and APIs using JavaScript. This allows for a consistent language and codebase between the server and the client, which can simplify development and maintenance.
* Package ecosystem: Node.js has a vibrant ecosystem of open-source packages and modules available through the Node Package Manager (NPM). NPM makes it easy to manage dependencies and integrate third-party libraries into your projects.
* Community and support: Node.js has a large and active community of developers, which means there is a wealth of documentation, tutorials, and support available for those working with Node.js.
* Cross-platform: Node.js is compatible with various operating systems, including Windows, macOS, and various Linux distributions, making it a versatile choice for building applications that can run on different platforms.

Node.js is commonly used for building web servers, APIs, real-time applications, and microservices. It has gained popularity in recent years due to its performance, scalability, and the ability to use JavaScript for both client-side and server-side development, making it a powerful tool for full-stack developers.

**Code for creating node.js sever**

const http = require('http');

const hostname = '127.0.0.1';

const port = 3000;

const server = http.createServer((req, res) => {

res.statusCode = 200;

res.setHeader('Content-Type', 'text/plain');

res.end('Hello World\n');

});

server.listen(port, hostname, () => {

console.log(`Server running at http://${hostname}:${port}/`);

});

#### **Answers to Activity 3**

* 1. What is Node JS?

**Node.js is an open-source server environment**

* 1. How is Node JS initiated on a computer?

**Through the command line interface**

* 1. Why do we use Node JS?

**Node JS is asynchronous**

* 1. What can Node JS do?

**Node JS can send dynamic content**   
**Node JS contains some tasks that can be executed on certain events eg someone trying to access a port on the server**

* 1. What is a module in Node JS the same as in JavaScript?

**Libraries.**

* 1. What is NPM?

**Node JS Package Manager**

* 1. What is contained in a Node JS Package?

**A package in Node.js contains all the files you need for a module**

## We did Configuring the game environment