

Node.js - First Application

Before creating an actual "Hello, World!" application using Node.js, let us see the components of a Node.js application. A Node.js application consists of the following three important components –

Import required modules – We use the **require** directive to load Node.js modules.

Create server – A server which will listen to client's requests similar to Apache HTTP Server.

Read request and return response – The server created in an earlier step will read the HTTP request made by the client which can be a browser or a console and return the response.

Creating Node.js Application

Step 1 - Import Required Module

We use the **require** directive to load the http module and store the returned HTTP instance into an http variable as follows –

```
var http = require("http");
```

Step 2 - Create Server

We use the created http instance and call **http.createServer()** method to create a server instance and then we bind it at port 8081 using the **listen** method associated with the server instance. Pass it a function with parameters request and response. Write the sample implementation to always return "Hello World".

```
http.createServer(function (request, response) {  
  // Send the HTTP header  
  // HTTP Status: 200 : OK  
  // Content Type: text/plain  
  response.writeHead(200, {'Content-Type': 'text/plain'});  
  
  // Send the response body as "Hello World"  
  response.end('Hello World\n');  
}).listen(8081);  
  
// Console will print the message
```

```
console.log(' Server running at http://127.0.0.1:8081/');
```

The above code is enough to create an HTTP server which listens, i.e., waits for a request over 8081 port on the local machine.

Step 3 - Testing Request & Response

Let's put step 1 and 2 together in a file called **main.js** and start our HTTP server as shown below –

```
var http = require("http");

http.createServer(function (request, response) {
  // Send the HTTP header
  // HTTP Status: 200 : OK
  // Content Type: text/plain
  response.writeHead(200, {'Content-Type': 'text/plain'});

  // Send the response body as "Hello World"
  response.end('Hello World\n');
}).listen(8081);

// Console will print the message
console.log(' Server running at http://127.0.0.1:8081/');
```

Now execute the main.js to start the server as follows –

```
$ node main.js
```

Verify the Output. Server has started.

```
Server running at http://127.0.0.1:8081/
```

Make a Request to the Node.js Server

Open <http://127.0.0.1:8081/> in any browser and observe the following result.

Node.js Sample
Content type unknown

Congratulations, you have your first HTTP server up and running which is responding to all the HTTP requests at port 8081.

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