

Node.js (server-side JavaScript)

- **Node.js HTTP Module –**
- Node.js has a built-in module called HTTP, which allows Node.js to transfer data over the Hyper Text Transfer Protocol (HTTP).
- To include the HTTP module, use the require() method:
- `var http = require('http');`
- Node.js as a Web Server
- The HTTP module can create an HTTP server that listens to server ports and gives a response back to the client.
- Use the createServer() method to create an HTTP server:
- Example
- `var http = require('http');`

```
//create a server object:  
http.createServer(function (req, res) {  
  res.write('Hello World!'); //write a response to the client  
  res.end(); //end the response  
}).listen(8080); //the server object listens on port 8080
```

- The function passed into the `http.createServer()` method, will be executed when someone tries to access the computer on port 8080.
- **Add an HTTP Header**
- If the response from the HTTP server is supposed to be displayed as HTML, you should include an HTTP header with the correct content type:
- Example
- ```
var http = require('http');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.write('Hello World!');
  res.end();
}).listen(8080);
```

- The first argument of the `res.writeHead()` method is the status code, 200 means that all is OK, the second argument is an object containing the response headers.
- **Read the Query String -**
- The function passed into the `http.createServer()` has a `req` argument that represents the request from the client, as an object (`http.IncomingMessage` object).
- This object has a property called `"url"` which holds the part of the url that comes after the domain name:
- `demo_http_url.js` –

```
var http = require('http');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.write(req.url);
  res.end();
}).listen(8080);
```

- Save the code above in a file called "demo\_http\_url.js" and initiate the file:
- **Initiate demo\_http\_url.js:**
- C:\Users\*Your Name*>node demo\_http\_url.js
- <http://localhost:8080/summer>
- Will produce this result:
- /summer
- <http://localhost:8080/winter>
- Will produce this result:
- /winter

- **Split the Query String -**

- There are built-in modules to easily split the query string into readable parts, such as the URL module.

- Example

- Split the query string into readable parts:

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

```
var url = require('url');
```

```
http.createServer(function (req, res) {  
  res.writeHead(200, {'Content-Type': 'text/html'});  
  var q = url.parse(req.url, true).query;  
  var txt = q.year + " " + q.month;  
  res.end(txt);  
}).listen(8080);
```

- Save the code above in a file called "demo\_querystring.js" and initiate the file:
- **Initiate demo\_querystring.js:**
- C:\Users\*Your Name*>node  
demo\_querystring.js
- The address:
- <http://localhost:8080/?year=2017&month=July>
- Will produce this result:
- 2017 July