



EXPRESS.JS



HTTP REQUEST

just a message with a certain format

```
POST /docs/1/related HTTP/1.1
Host: www.test101.com
Accept: image/gif, image/jpeg, */*
Accept-Language: en-us
Accept-Encoding: gzip, deflate
User-Agent: Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1)

bookId=12345&author=Nimit
```

(from http://www.ntu.edu.sg/home/ehchua/programming/webprogramming/HTTP_Basics.html)

“Oh boy! Parsing this string of text will be lots of fun!”

– NO DEVELOPER EVER

BUILDING A SERVER WITH NODE

- **Node.js provides several low-level tools for building servers**
- **Abstracts HTTP requests and responses into nice objects that have useful methods**

```
const http = require('http')  
  
const server = http.createServer()  
  
server.listen(3000, 'localhost')
```

```
const http = require('http')

const server = http.createServer()

server.on('request', (req, res) => {
  res.writeHead(200)
  res.write('<h1>Welcome to my website</h1>')
  res.end()
})

server.listen(3000, 'localhost')
```

```
const http = require('http')

const server = http.createServer()

server.on('request', (req, res) => {
  if (req.method === 'GET') {
    if (req.url === '/') {
      res.writeHead(200)
      res.write(`<h1>Welcome to the main page!</h1>`)
      res.end()
    } else if (req.url === '/puppies') {
      res.writeHead(200)
      res.write(`<h1>Welcome to the puppies page!</h1>`)
      res.end()
    }
  }
})

server.listen(3000, 'localhost')
```



EXPRESS

A library for request handling in Node



```
const express = require('express')  
  
const app = express()  
  
app.listen(3000)
```



```
const express = require('express')

const app = express()

app.get('/', (req, res, next) => {
  res.send(`<h1>Welcome to the main page</h1>`)
})

app.listen(3000)
```



```
const express = require('express')

const app = express()

app.get('/', (req, res, next) => {
  res.send(`<h1>Welcome to the main page</h1>`)
})

app.get('/puppies', (req, res, next) => {
  res.send(`<h1>Welcome to the puppies page</h1>`)
})

app.listen(3000)
```

DEMO

SUMMARY

- **We can use Node to easily create servers**
- **The `express` library makes it even easier to write (and subsequently maintain) our server code**
- **The `express` library is just a (light) abstraction over the built-in node `http` module, which is itself an abstraction over some code written in C++ making lower-level system calls**