

CSc 337

Node and Express

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What is express ?

- Node package that can be used to build web servers
- Utilizes callbacks
 - (as with node itself)
- Other modules too:
<https://nodejs.dev/en/learn/>

Routes

- Routes are a fundamental concept of express
- Basically, gives the developer easy way to control the server response based on the PATH portion of the requested URL

Responding differently to:

`http://domainname.com/applications`

`http://domainname.com/projects`

`http://domainname.com/contracts`

`. . . etc . . .`

A basic server



```
const express = require('express');
const app = express();
const port = 3000;

app.get('/', (req, res) => res.send('Some response'));

app.listen(port, () =>
  console.log(
    `Example app listening at http://localhost:${port}`));
```

Specifying Routes

The way to specify routes in code is:

```
app.METHOD(PATH, ACTION);
```

- **METHOD** - the http method used (**get**, **post**, etc)
- **PATH** - string (or regex!) of path(s) to match from URL
- **ACTION** - the function to call when there is a route match. Function should have two params, request info and response

Example Route

```
app.get('/translate/e2s/:word',  
  function(req, res) {  
    word = req.params.word  
    result = translateE2S(word)  
    res.end(result)  
  });
```

Math server

- Implement a simple express server that can do basic math calculations (add, subtract, divide, multiply)
- Should accept URLs of the form:
`/calculate/:operation/:num1/:num2`
- Should perform the **operation** using **num1** and **num2** and respond with the resulting value
- For example:
`/calculate/add/50/30 -> 80`
`/calculate/subtract/50/50 -> 0`

Thesaurus Server

Update the thesaurus server to use express for handling the routes