

Node.js Express

Team on a Cob

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What is Express.js?

- Express is framework middleware for node.js. It helps with building and designing web applications.
- This minimalist framework is used mostly for organizational purposes, a few examples being: routing, handling requests and templating.

Our Implementation of Express

We use the following major features Express has to offer:

- 1) Rendering of pug files
 - a) This allows for dynamic data to be displayed on web pages
 - i) Myworkouts page
 - ii) View athlete/team pages
- 2) Handles our routing/redirection needs
 - a) Combined with passport, this offers limited access of pages
- 3) Downloading of clustered information stored on our database
 - a) One simple line can execute a very sophisticated process
 - i) Most of the excess code is assisting with error checking and CSV formatting

Routing Example

```
// Get Login Page
router.get('/', function(req, res){
  res.render('site.pug');
});

// Home Page
router.get('/home', function(req, res){
  if(req.isAuthenticated()){
    res.render('signin.pug');
  } else {
    res.redirect('/');
  }
});

// Logout
router.get('/logout', function(req, res){
  if(req.isAuthenticated()){
    req.logout();
    res.redirect('/');
  } else {
    res.redirect('/');
  }
});

// Workout Entry
router.get('/workoutentry', function(req, res){
  if(req.isAuthenticated()){
    res.render('workoutentry.pug');
  } else {
    res.redirect('/');
  }
});

// View my workouts
router.get('/myworkouts', function(req, res){
  if(req.isAuthenticated()){
    //access workout info through [] index operator, rows of query returned
    var workouts;

    queries.get_workouts({user: req.user.id}, function(err, result){
      workouts = result;
      //console.log(workouts);
      res.render('myworkouts.pug', { data_w: JSON.stringify(workouts), data: workouts });
    });
  } else {
    res.redirect('/');
  }
});
```

(Advanced) Using Express to Download Files:

```
1 function dump(team,objArray, res)
2 {
3     if(typeof objArray == 'object'){
4         var array = typeof objArray != 'object' ? JSON.parse(objArray) : objArray;
5         var str = '';
6         for (var i = 0; i < array.length; i++){
7             if(i == 0){
8                 str += 'athlete,date,sleep,health_status,illness,injury,percent_health,cycle_start,RPE,time,distance,notes,workoutID\r\n';
9             }
10            var line = '';
11            for (var index in array[i]) {
12                if (line != '') line += ','
13
14                line += array[i][index];
15            }
16            str += line + '\r\n';
17        }
18
19        console.log(str);
20        filesystem.writeFile('datadump.csv', str, function (err) {
21            if (err) throw err;
22            console.log('It\'s saved!');
23            res.download('datadump.csv', 'datadump.csv');
24        });
25    }
26
27    else{
28        if(team==true) res.render('admin_data_dump_b.pug');
29        else res.render('admin_data_dump_a.pug');
30    }
31 }
```