

```
1. <!--
2.
3.  index.html
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  A homepage for the course that mimics iOS's UI.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <link href="ios.css" rel="stylesheet">
17.     <meta name="viewport" content="width=device-width">
18.     <title>CS164</title>
19.   </head>
20.   <body>
21.     <h1>CS164</h1>
22.     <ul>
23.       <li><a href="lectures.html">Lectures</a></li>
24.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
25.     </ul>
26.   </body>
27. </html>
```

```
1. body
2. {
3.     font-family: Helvetica, sans-serif;
4.     margin: 0;
5. }
6.
7. h1
8. {
9.     background-color: #7C92AE;
10.    background-image: -webkit-gradient(linear, 0% 0%, 0% 100%, from(#ABB9CB), color-stop(0.5, #8C9FB8), color-stop(0.51, #7C92AE), to(#6C85A4));
11.    color: #FFF;
12.    font-size: 18px;
13.    margin: 0;
14.    padding: 6px;
15.    text-align: center;
16. }
17.
18. li a
19. {
20.    border-bottom: 1px #CCC solid;
21.    color: #000;
22.    display: block;
23.    font-weight: bold;
24.    padding: 10px;
25.    text-decoration: none;
26. }
27.
28. ul
29. {
30.    list-style: none;
31.    margin: 0;
32.    padding: 0;
33. }
```

```
1. <!--
2.
3. lecture0.html
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. Represents a lecture.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <link href="ios.css" rel="stylesheet">
17.     <meta name="viewport" content="width=device-width">
18.     <title>Lecture 0</title>
19.   </head>
20.   <body>
21.     <h1>Lecture 0</h1>
22.     <ul>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
24.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
25.     </ul>
26.   </body>
27. </html>
```

```
1. <!--
2.
3.  lecture1.html
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  Represents a lecture.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <link href="ios.css" rel="stylesheet">
17.     <meta name="viewport" content="width=device-width">
18.     <title>Lecture 1</title>
19.   </head>
20.   <body>
21.     <h1>Lecture 1</h1>
22.     <ul>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
24.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
25.     </ul>
26.   </body>
27. </html>
```

```
1.
2. <!DOCTYPE html>
3.
4. <!--
5.
6. lectures.html
7.
8. David J. Malan
9. malan@harvard.edu
10.
11. Links to lectures.
12.
13. -->
14.
15. <html>
16.   <head>
17.     <link href="ios.css" rel="stylesheet">
18.     <meta name="viewport" content="width=device-width">
19.     <title>Lectures</title>
20.   </head>
21.   <body>
22.     <h1>Lectures</h1>
23.     <ul>
24.       <li><a href="lecture0.html">Lecture 0</a></li>
25.       <li><a href="lecture1.html">Lecture 1</a></li>
26.     </ul>
27.   </body>
28. </html>
```

```
1. <!--
2.
3. index.html
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. Demonstrates jQuery Mobile.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <link rel="stylesheet" href="http://code.jquery.com/mobile/1.0.1/jquery.mobile-1.0.1.min.css">
17.     <meta name="viewport" content="width=device-width">
18.     <script src="http://code.jquery.com/jquery-1.6.4.min.js"></script>
19.     <script src="http://code.jquery.com/mobile/1.0.1/jquery.mobile-1.0.1.min.js"></script>
20.     <title>CS164</title>
21.   </head>
22.   <body>
23.
24.     <div data-role="page" id="menu">
25.
26.       <div data-role="header" data-theme="b">
27.         <h1>CS164</h1>
28.       </div>
29.
30.       <div data-role="content">
31.         <ul data-role="listview" data-theme="c">
32.           <li><a href="#lectures">Lectures</a></li>
33.           <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf" rel="external">Syllabus</a></li>
34.         </ul>
35.       </div>
36.
37.     </div>
38.
39.     <div data-role="page" id="lectures">
40.
41.       <div data-role="header" data-theme="b">
42.         <h1>Lectures</h1>
43.       </div>
44.
45.       <div data-role="content">
46.         <ul data-role="listview" data-theme="c">
47.           <li><a href="#lecture0">Lecture 0</a></li>
48.           <li><a href="#lecture1">Lecture 1</a></li>
```

```
49.     </ul>
50. </div>
51.
52. </div>
53.
54. <div data-role="page" id="lecture0">
55.
56.   <div data-role="header" data-theme="b">
57.     <h1>Lecture 0</h1>
58.   </div>
59.
60.   <div data-role="content">
61.     <ul data-role="listview" data-theme="c">
62.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf" rel="external">Slides</a></li>
63.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4" rel="external">Video</a></li>
64.     </ul>
65.   </div>
66.
67. </div>
68.
69. <div data-role="page" id="lecture1">
70.
71.   <div data-role="header" data-theme="b">
72.     <h1>Lecture 1</h1>
73.   </div>
74.
75.   <div data-role="content">
76.     <ul data-role="listview" data-theme="c">
77.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf" rel="external">Slides</a></li>
78.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4" rel="external">Video</a></li>
79.     </ul>
80.   </div>
81.
82. </div>
83.
84. </body>
85. </html>
```

```
1. <!--
2.
3.  index.html
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  A homepage for the course.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>CS164</title>
18.   </head>
19.   <body>
20.     <h1>CS164</h1>
21.     <ul>
22.       <li><a href="lectures.html">Lectures</a></li>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
24.     </ul>
25.   </body>
26. </html>
```



```
1. <!--
2.
3.  lecture0.html
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  Represents a lecture.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>Lecture 0</title>
18.   </head>
19.   <body>
20.     <h1>Lecture 0</h1>
21.     <ul>
22.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
24.     </ul>
25.   </body>
26. </html>
```

```
1. <!--
2.
3.  lecture1.html
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  Represents a lecture.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>Lecture 1</title>
18.   </head>
19.   <body>
20.     <h1>Lecture 1</h1>
21.     <ul>
22.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
24.     </ul>
25.   </body>
26. </html>
```

```
1. <!--
2.
3.  lectures.html
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  Links to lectures.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>Lectures</title>
18.   </head>
19.   <body>
20.     <h1>Lectures</h1>
21.     <ul>
22.       <li><a href="lecture0.html">Lecture 0</a></li>
23.       <li><a href="lecture1.html">Lecture 1</a></li>
24.     </ul>
25.   </body>
26. </html>
```

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <link rel="apple-touch-icon" href="custom_icon.png">
6.     <meta name="apple-mobile-web-app-capable" content="yes">
7.     <meta name="apple-mobile-web-app-status-bar-style" content="black">
8.     <meta name="viewport" content="width=device-width">
9.     <title>Tommy App</title>
10.  </head>
11.  <body style="margin: 0">
12.    
13.  </body>
14. </html>
```

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title>device-width</title>
7.   </head>
8.   <body>
9.     Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent consectetur adipiscing dignissim. Aenean lectus erat, ornare ultrices
pharetra ac, dignissim vel lacus. Vivamus turpis ante, lacinia placerat ultrices non, suscipit at arcu. Nullam ut fringilla eros. Curabitur
tincidunt mollis libero cursus feugiat. Pellentesque tincidunt leo lectus, at feugiat sapien. In dignissim, risus vel faucibus sodales, mauris
tortor imperdiet lorem, faucibus porta neque nulla facilisis urna. Donec risus leo, cursus vel cursus vel, luctus ut eros.
10.   </body>
11. </html>
```

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <title>html5</title>
6.   </head>
7.   <body>
8.     <p>
9.       Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent consectetur adipiscing dignissim. Aenean lectus erat, ornare ultrices
pharetra ac, dignissim vel lacus. Vivamus turpis ante, lacinia placerat ultrices non, suscipit at arcu. Nullam ut fringilla eros. Curabitur
tincidunt mollis libero cursus feugiat. Pellentesque tincidunt leo lectus, at feugiat sapien. In dignissim, risus vel faucibus sodales, mauris
tortor imperdiet lorem, faucibus porta neque nulla facilisis urna. Donec risus leo, cursus vel cursus vel, luctus ut eros.
10.    </p>
11.  </body>
12. </html>
```

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title>tel</title>
7.   </head>
8.   <body>
9.     <form>
10.      <input autocapitalize="off" autocomplete="off" autocorrect="off" placeholder="Email" type="email">
11.      <br>
12.      <input autocapitalize="off" autocomplete="off" autocorrect="off" placeholder="URL" type="url">
13.    </form>
14.  </body>
15. </html>
```

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title>sms</title>
7.   </head>
8.   <body>
9.     <a href="sms:6172720464">text Tommy</a>
10.  </body>
11. </html>
```



```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title>tel</title>
7.   </head>
8.   <body>
9.     <a href="tel:6172720464">call Tommy</a>
10.  </body>
11. </html>
```

```
1. <!--
2.
3. index.php
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. A homepage for the course.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>CS164</title>
18.   </head>
19.   <body>
20.     <h1>CS164</h1>
21.     <ul>
22.       <li><a href="lectures.php">Lectures</a></li>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
24.     </ul>
25.   </body>
26. </html>
```

```
1. <!--
2.
3. lecture0.php
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. Represents a lecture.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>Lecture 0</title>
18.   </head>
19.   <body>
20.     <h1>Lecture 0</h1>
21.     <ul>
22.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
24.     </ul>
25.   </body>
26. </html>
```

```
1. <!--
2.
3. lecture1.php
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. Represents a lecture.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>Lecture 1</title>
18.   </head>
19.   <body>
20.     <h1>Lecture 1</h1>
21.     <ul>
22.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
23.       <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
24.     </ul>
25.   </body>
26. </html>
```

```
1. <!--
2.
3. lectures.php
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. Links to lectures.
9.
10. -->
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>Lectures</title>
18.   </head>
19.   <body>
20.     <h1>Lectures</h1>
21.     <ul>
22.       <li><a href="lecture0.php">Lecture 0</a></li>
23.       <li><a href="lecture1.php">Lecture 1</a></li>
24.     </ul>
25.   </body>
26. </html>
```

```
1. <?php /*
2.
3. footer.php
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. A footer for pages.
9.
10. */ ?>
11.
12. </body>
13. </html>
```

```
1. <?php /*
2.
3. header.php
4.
5. David J. Malan
6. malan@harvard.edu
7.
8. A header for pages.
9.
10. */ ?>
11.
12. <!DOCTYPE html>
13.
14. <html>
15.   <head>
16.     <meta name="viewport" content="width=device-width">
17.     <title>CS164</title>
18.   </head>
19.   <body>
20.     <h1>CS164</h1>
```

```
1. <?php require('header.php'); ?>
2.
3. <ul>
4.   <li><a href="lectures.php">Lectures</a></li>
5.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
6. </ul>
7.
8. <?php require('footer.php'); ?>
```



```
1. <?php /*
2.
3.  lecture0.php
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  Represents a lecture.
9.
10. */ ?>
11.
12. <?php require('header.php'); ?>
13.
14. <ul>
15.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
16.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
17. </ul>
18.
19. <?php require('footer.php'); ?>
```

```
1. <?php /*
2.
3.  lecture1.php
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  Represents a lecture.
9.
10. */ ?>
11.
12. <?php require('header.php'); ?>
13.
14. <ul>
15.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
16.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
17. </ul>
18.
19. <?php require('footer.php'); ?>
```

```
1. <?php /*
2.
3.  lectures.php
4.
5.  David J. Malan
6.  malan@harvard.edu
7.
8.  Links to lectures.
9.
10. */ ?>
11.
12. <?php require('header.php'); ?>
13.
14. <ul>
15.     <li><a href="lecture0.php">Lecture 0</a></li>
16.     <li><a href="lecture1.php">Lecture 1</a></li>
17. </ul>
18.
19. <?php require('footer.php'); ?>
```

1. mvc/1/README
- 2.
3. David J. Malan
4. malan@harvard.edu
- 5.
6. Computer Science 164
7. Harvard College
- 8.
9. Improves upon mvc/0 by factoring out pages' header and footer.
- 10.
11. footer.php - pages' footer
12. header.php - pages' header
13. index.php - homepage for the course
14. lecture0.php - a lecture
15. lecture1.php - a lecture
16. lectures.php - a list of lectures

1. `</body>`
2. `</html>`

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title><?php echo htmlspecialchars($title) ?></title>
7.   </head>
8.   <body>
9.     <h1><?php echo htmlspecialchars($title) ?></h1>
```

```
1. <?php
2.
3. /**
4.  * Renders footer.
5.  *
6.  * @param array $data
7.  */
8. function renderFooter($data = array())
9. {
10.     extract($data);
11.     require('footer.php');
12. }
13.
14. /**
15.  * Renders header.
16.  *
17.  * @param array $data
18.  */
19. function renderHeader($data = array())
20. {
21.     extract($data);
22.     require('header.php');
23. }
24.
25. ?>
```

```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7.
8. <?php renderHeader(array('title' => 'CS164')); ?>
9.
10. <ul>
11.     <li><a href="lectures.php">Lectures</a></li>
12.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
13. </ul>
14.
15. <?php renderFooter(); ?>
```



```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7. <?php renderHeader(array('title' => 'Lecture 0')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
12. </ul>
13.
14. <?php renderFooter(); ?>
```

```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7. <?php renderHeader(array('title' => 'Lecture 1')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
12. </ul>
13.
14. <?php renderFooter(); ?>
```

```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7. <?php renderHeader(array('title' => 'Lectures')); ?>
8.
9. <ul>
10.     <li><a href="lecture0.php">Lecture 0</a></li>
11.     <li><a href="lecture1.php">Lecture 1</a></li>
12. </ul>
13.
14. <?php renderFooter(); ?>
```

1. mvc/2/README
- 2.
3. David J. Malan
4. malan@harvard.edu
- 5.
6. Computer Science 164
7. Harvard College
- 8.
9. Improves upon mvc/1 by wrapping header and footer with a parameterized function.
- 10.
11. footer.php - pages' footer
12. header.php - pages' header
13. helpers.php - helper functions
14. index.php - homepage for the course
15. lecture0.php - a lecture
16. lecture1.php - a lecture
17. lectures.php - a list of lectures

1. `</body>`
2. `</html>`

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title><?php echo htmlspecialchars($title) ?></title>
7.   </head>
8.   <body>
9.     <h1><?php echo htmlspecialchars($title) ?></h1>
```

```
1. <?php
2.
3. /**
4.  * Renders template.
5.  *
6.  * @param array $data
7.  */
8. function render($template, $data = array())
9. {
10.     $path = $template . '.php';
11.     if (file_exists($path))
12.     {
13.         extract($data);
14.         require($path);
15.     }
16. }
17.
18. ?>
```

```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7.
8. <?php render('header', array('title' => 'CS164')); ?>
9.
10. <ul>
11.     <li><a href="lectures.php">Lectures</a></li>
12.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
13. </ul>
14.
15. <?php render('footer'); ?>
```



```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lecture 0')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```

```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lecture 1')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```

```
1. <?php
2.
3. require_once('helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lectures')); ?>
8.
9. <ul>
10.     <li><a href="lecture0.php">Lecture 0</a></li>
11.     <li><a href="lecture1.php">Lecture 1</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```

1. mvc/3/README
- 2.
3. David J. Malan
4. malan@harvard.edu
- 5.
6. Computer Science 164
7. Harvard College
- 8.
9. Improves upon mvc/2 by generalizing header and footer as templates.
- 10.
11. footer.php - pages' footer
12. header.php - pages' header
13. helpers.php - helper functions
14. index.php - homepage for the course
15. lecture0.php - a lecture
16. lecture1.php - a lecture
17. lectures.php - a list of lectures

```
1. <?php
2.
3. /**
4.  * Renders template.
5.  *
6.  * @param array $data
7.  */
8. function render($template, $data = array())
9. {
10.     $path = __DIR__ . '/../templates/' . $template . '.php';
11.     if (file_exists($path))
12.     {
13.         extract($data);
14.         require($path);
15.     }
16. }
17.
18. ?>
```

```
1. <?php
2.
3. require_once('includes/helpers.php');
4.
5. ?>
6.
7.
8. <?php render('header', array('title' => 'CS164')); ?>
9.
10. <ul>
11.     <li><a href="lectures.php">Lectures</a></li>
12.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
13. </ul>
14.
15. <?php render('footer'); ?>
```

```
1. <?php
2.
3. require_once('includes/helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lecture 0')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```

```
1. <?php
2.
3. require_once('includes/helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lecture 1')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```



```
1. <?php
2.
3. require_once('includes/helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lectures')); ?>
8.
9. <ul>
10.     <li><a href="lecture0.php">Lecture 0</a></li>
11.     <li><a href="lecture1.php">Lecture 1</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```

1. mvc/4/README
- 2.
3. David J. Malan
4. malan@harvard.edu
- 5.
6. Computer Science 164
7. Harvard College
- 8.
9. Improves upon mvc/3 by organizing files into subdirectories.
- 10.
11. includes/
 12. helpers.php - helper functions
 13. index.php - homepage for the course
 14. lecture0.php - a lecture
 15. lecture1.php - a lecture
 16. lectures.php - a list of lectures
17. templates/
 18. footer.php - pages' footer
 19. header.php - pages' header

1. `</body>`
2. `</html>`

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title><?php echo htmlspecialchars($title) ?></title>
7.   </head>
8.   <body>
9.     <h1><?php echo htmlspecialchars($title) ?></h1>
```

```
1. <?php
2.
3. require_once('../includes/helpers.php');
4.
5. ?>
6.
7.
8. <?php render('header', array('title' => 'CS164')); ?>
9.
10. <ul>
11.     <li><a href="lectures.php">Lectures</a></li>
12.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
13. </ul>
14.
15. <?php render('footer'); ?>
```

```
1. <?php
2.
3. require_once('../includes/helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lecture 0')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/slides0.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/lecture0.mp4">Video</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```

```
1. <?php
2.
3. require_once('../includes/helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lecture 1')); ?>
8.
9. <ul>
10.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/slides1.pdf">Slides</a></li>
11.     <li><a href="http://cdn.cs164.net/2012/spring/lectures/1/lecture1.mp4">Video</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```

```
1. <?php
2.
3. require_once('../includes/helpers.php');
4.
5. ?>
6.
7. <?php render('header', array('title' => 'Lectures')); ?>
8.
9. <ul>
10.     <li><a href="lecture0.php">Lecture 0</a></li>
11.     <li><a href="lecture1.php">Lecture 1</a></li>
12. </ul>
13.
14. <?php render('footer'); ?>
```



```
1. <?php
2.
3. /**
4.  * Renders template.
5.  *
6.  * @param array $data
7.  */
8. function render($template, $data = array())
9. {
10.     $path = __DIR__ . '/../templates/' . $template . '.php';
11.     if (file_exists($path))
12.     {
13.         extract($data);
14.         require($path);
15.     }
16. }
17.
18. ?>
```

1. mvc/5/README
- 2.
3. David J. Malan
4. malan@harvard.edu
- 5.
6. Computer Science 164
7. Harvard College
- 8.
9. Improves upon mvc/4 by isolating web-accessible content in its own subdirectory.
- 10.
11. html/
 12. index.php - homepage for the course
 13. lecture0.php - a lecture
 14. lecture1.php - a lecture
 15. lectures.php - a list of lectures
16. includes/
 17. helpers.php - helper functions
18. templates/
 19. footer.php - pages' footer
 20. header.php - pages' header

1. `</body>`
2. `</html>`

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title><?php echo htmlspecialchars($title) ?></title>
7.   </head>
8.   <body>
9.     <h1><?php echo htmlspecialchars($title) ?></h1>
```

```
1. <?php
2.
3. require_once('../includes/helpers.php');
4.
5. // determine which page to render
6. if (isset($_GET['page']))
7.     $page = $_GET['page'];
8. else
9.     $page = 'index';
10.
11. // show page
12. switch ($page)
13. {
14.     case 'index':
15.         render('templates/header', array('title' => 'CS164'));
16.         render('index');
17.         render('templates/footer');
18.         break;
19.
20.     case 'lecture':
21.         if (isset($_GET['n']))
22.             {
23.                 render('templates/header', array('title' => 'Lecture ' . $_GET['n']));
24.                 render('lecture', array('n' => $_GET['n']));
25.                 render('templates/footer');
26.             }
27.         break;
28.
29.     case 'lectures':
30.         render('templates/header', array('title' => 'Lectures'));
31.         render('lectures');
32.         render('templates/footer');
33.         break;
34. }
35.
36. ?>
```

```
1. <?php
2.
3. /**
4.  * Renders template.
5.  *
6.  * @param array $data
7.  */
8. function render($template, $data = array())
9. {
10.     $path = __DIR__ . '/../views/' . $template . '.php';
11.     if (file_exists($path))
12.     {
13.         extract($data);
14.         require($path);
15.     }
16. }
17.
18. ?>
```

1. mvc/6/README
- 2.
3. David J. Malan
4. malan@harvard.edu
- 5.
6. Computer Science 164
7. Harvard College
- 8.
9. Improves upon mvc/5 by introducing a controller.
- 10.
11. html/
12. index.php - controller
13. includes/
14. helpers.php - helper functions
15. views/
16. index.php - homepage for the course
17. lecture.php - a lecture
18. lectures.php - a list of lectures
19. templates/
20. footer.php - pages' footer
21. header.php - pages' header

```
1. <ul>
2.   <li><a href="?page=lectures">Lectures</a></li>
3.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
4. </ul>
```



```
1. <ul>
2.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/<?php echo $n ?>/slides<?php echo $n ?>.pdf">Slides</a></li>
3.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/<?php echo $n ?>/lecture<?php echo $n ?>.mp4">Video</a></li>
4. </ul>
```

```
1. <ul>
2.   <li><a href="?page=lecture&n=0">Lecture 0</a></li>
3.   <li><a href="?page=lecture&n=1">Lecture 1</a></li>
4. </ul>
```

1. `</body>`
2. `</html>`

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title><?php echo htmlspecialchars($title) ?></title>
7.   </head>
8.   <body>
9.     <h1><?php echo htmlspecialchars($title) ?></h1>
```

```
1. <?php
2.
3. require_once('../includes/helpers.php');
4.
5. // determine which page to render
6. if (isset($_GET['page']))
7.     $page = $_GET['page'];
8. else
9.     $page = 'index';
10.
11. // show page
12. switch ($page)
13. {
14.     case 'index':
15.         render('templates/header', array('title' => 'CS164'));
16.         render('index');
17.         render('templates/footer');
18.         break;
19.
20.     case 'lectures':
21.         render('templates/header', array('title' => 'Lectures'));
22.         render('lectures');
23.         render('templates/footer');
24.         break;
25.
26.     case 'lecture':
27.         if (isset($_GET['n']))
28.         {
29.             render('templates/header', array('title' => 'Lecture ' . $_GET['n']));
30.             render('lecture', array('n' => $_GET['n']));
31.             render('templates/footer');
32.         }
33.         break;
34. }
35.
36. ?>
```

```
1. <?php
2.
3. /**
4.  * Renders template.
5.  *
6.  * @param array $data
7.  */
8. function render($template, $data = array())
9. {
10.     $path = __DIR__ . '/../views/' . $template . '.php';
11.     if (file_exists($path))
12.     {
13.         extract($data);
14.         require($path);
15.     }
16. }
17.
18. ?>
```

1. mvc/7/README
- 2.
3. David J. Malan
4. malan@harvard.edu
- 5.
6. Computer Science 164
7. Harvard College
- 8.
9. Improves upon mvc/6 by introducing search engine-friendly URLs via mod_rewrite.
- 10.
11. html/
12. index.php - controller
13. includes/
14. helpers.php - helper functions
15. views/
16. index.php - homepage for the course
17. lecture.php - a lecture
18. lectures.php - a list of lectures
19. templates/
20. footer.php - pages' footer
21. header.php - pages' header

```
1. <ul>
2.   <li><a href="lectures">Lectures</a></li>
3.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
4. </ul>
```



```
1. <ul>
2.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/<?php echo $n ?>/slides<?php echo $n ?>.pdf">Slides</a></li>
3.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/<?php echo $n ?>/lecture<?php echo $n ?>.mp4">Video</a></li>
4. </ul>
```

```
1. <ul>
2.   <li><a href="lecture/0">Lecture 0</a></li>
3.   <li><a href="lecture/1">Lecture 1</a></li>
4. </ul>
```

1. `</body>`
2. `</html>`

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title><?php echo htmlspecialchars($title) ?></title>
7.   </head>
8.   <body>
9.     <h1><?php echo htmlspecialchars($title) ?></h1>
```

```
1. <?php
2.
3. class Homepage extends CI_Controller {
4.
5.     public function index()
6.     {
7.         $this->load->view('templates/header', array('title' => 'CS164'));
8.         $this->load->view('homepage/index');
9.         $this->load->view('templates/footer');
10.    }
11.
12.    public function lectures()
13.    {
14.        $this->load->view('templates/header', array('title' => 'Lectures'));
15.        $this->load->view('homepage/lectures');
16.        $this->load->view('templates/footer');
17.    }
18.
19.    public function lecture($n)
20.    {
21.        $this->load->view('templates/header', array('title' => 'Lecture ' . $n));
22.        $this->load->view('homepage/lecture', array('n' => $n));
23.        $this->load->view('templates/footer');
24.    }
25. }
26.
27. ?>
```

```
1. <ul>
2.   <li><a href="lectures">Lectures</a></li>
3.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/0/syllabus.pdf">Syllabus</a></li>
4. </ul>
```

```
1. <ul>
2.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/<?php echo $n ?>/slides<?php echo $n ?>.pdf">Slides</a></li>
3.   <li><a href="http://cdn.cs164.net/2012/spring/lectures/<?php echo $n ?>/lecture<?php echo $n ?>.mp4">Video</a></li>
4. </ul>
```

```
1. <ul>
2.   <li><a href="lecture/0">Lecture 0</a></li>
3.   <li><a href="lecture/1">Lecture 1</a></li>
4. </ul>
```


1. `</body>`
2. `</html>`

```
1. <!DOCTYPE html>
2.
3. <html>
4.   <head>
5.     <meta name="viewport" content="width=device-width">
6.     <title><?php echo htmlspecialchars($title) ?></title>
7.   </head>
8.   <body>
9.     <h1><?php echo htmlspecialchars($title) ?></h1>
```

```
1. <?php
2.
3. /*
4. *-----
5. * APPLICATION ENVIRONMENT
6. *-----
7. *
8. * You can load different configurations depending on your
9. * current environment. Setting the environment also influences
10. * things like logging and error reporting.
11. *
12. * This can be set to anything, but default usage is:
13. *
14. *     development
15. *     testing
16. *     production
17. *
18. * NOTE: If you change these, also change the error_reporting() code below
19. *
20. */
21.     define('ENVIRONMENT', 'development');
22. /*
23. *-----
24. * ERROR REPORTING
25. *-----
26. *
27. * Different environments will require different levels of error reporting.
28. * By default development will show errors but testing and live will hide them.
29. */
30.
31. if (defined('ENVIRONMENT'))
32. {
33.     switch (ENVIRONMENT)
34.     {
35.         case 'development':
36.             error_reporting(E_ALL);
37.             break;
38.
39.         case 'testing':
40.         case 'production':
41.             error_reporting(0);
42.             break;
43.
44.         default:
45.             exit('The application environment is not set correctly.');
```

```
49. /*
50. *-----
51. * SYSTEM FOLDER NAME
52. *-----
53. *
54. * This variable must contain the name of your "system" folder.
55. * Include the path if the folder is not in the same directory
56. * as this file.
57. *
58. */
59.     $system_path = '../system';
60.
61. /*
62. *-----
63. * APPLICATION FOLDER NAME
64. *-----
65. *
66. * If you want this front controller to use a different "application"
67. * folder then the default one you can set its name here. The folder
68. * can also be renamed or relocated anywhere on your server. If
69. * you do, use a full server path. For more info please see the user guide:
70. * http://codeigniter.com/user\_guide/general/managing\_apps.html
71. *
72. * NO TRAILING SLASH!
73. *
74. */
75.     $application_folder = '../application';
76.
77. /*
78. *-----
79. * DEFAULT CONTROLLER
80. *-----
81. *
82. * Normally you will set your default controller in the routes.php file.
83. * You can, however, force a custom routing by hard-coding a
84. * specific controller class/function here. For most applications, you
85. * WILL NOT set your routing here, but it's an option for those
86. * special instances where you might want to override the standard
87. * routing in a specific front controller that shares a common CI installation.
88. *
89. * IMPORTANT: If you set the routing here, NO OTHER controller will be
90. * callable. In essence, this preference limits your application to ONE
91. * specific controller. Leave the function name blank if you need
92. * to call functions dynamically via the URI.
93. *
94. * Un-comment the $routing array below to use this feature
95. *
96. */
```

```
97. // The directory name, relative to the "controllers" folder. Leave blank
98. // if your controller is not in a sub-folder within the "controllers" folder
99. // $routing['directory'] = '';
100.
101. // The controller class file name. Example: Mycontroller
102. // $routing['controller'] = '';
103.
104. // The controller function you wish to be called.
105. // $routing['function'] = '';
106.
107.
108. /*
109. * -----
110. * CUSTOM CONFIG VALUES
111. * -----
112. *
113. * The $assign_to_config array below will be passed dynamically to the
114. * config class when initialized. This allows you to set custom config
115. * items or override any default config values found in the config.php file.
116. * This can be handy as it permits you to share one application between
117. * multiple front controller files, with each file containing different
118. * config values.
119. *
120. * Un-comment the $assign_to_config array below to use this feature
121. *
122. */
123. // $assign_to_config['name_of_config_item'] = 'value of config item';
124.
125.
126.
127. // -----
128. // END OF USER CONFIGURABLE SETTINGS. DO NOT EDIT BELOW THIS LINE
129. // -----
130.
131. /*
132. * -----
133. * Resolve the system path for increased reliability
134. * -----
135. */
136.
137. // Set the current directory correctly for CLI requests
138. if (defined('STDIN'))
139. {
140.     chdir(dirname(__FILE__));
141. }
142.
143. if (realpath($system_path) !== FALSE)
144. {
```

```
145.     $system_path = realpath($system_path).'/';
146. }
147.
148. // ensure there's a trailing slash
149. $system_path = rtrim($system_path, '/').'/';
150.
151. // Is the system path correct?
152. if ( ! is_dir($system_path) )
153. {
154.     exit("Your system folder path does not appear to be set correctly. Please open the following file and correct this: ".pathinfo(
155.     __FILE__, PATHINFO_BASENAME));
156. }
157. /*
158. * -----
159. * Now that we know the path, set the main path constants
160. * -----
161. */
162. // The name of THIS file
163. define('SELF', pathinfo(__FILE__, PATHINFO_BASENAME));
164.
165. // The PHP file extension
166. // this global constant is deprecated.
167. define('EXT', '.php');
168.
169. // Path to the system folder
170. define('BASEPATH', str_replace("\\", "/", $system_path));
171.
172. // Path to the front controller (this file)
173. define('FCPATH', str_replace(SELF, '', __FILE__));
174.
175. // Name of the "system folder"
176. define('SYSDIR', trim(strchr(trim(BASEPATH, '/'), '/'), '/'));
177.
178.
179. // The path to the "application" folder
180. if (is_dir($application_folder))
181. {
182.     define('APPPATH', $application_folder.'/');
183. }
184. else
185. {
186.     if ( ! is_dir(BASEPATH.$application_folder.'/'))
187.     {
188.         exit("Your application folder path does not appear to be set correctly. Please open the following file and correct this: ".SELF);
189.     }
190.
191.     define('APPPATH', BASEPATH.$application_folder.'/');
```

```
192.     }
193.
194. /*
195.  * -----
196.  * LOAD THE BOOTSTRAP FILE
197.  * -----
198.  *
199.  * And away we go...
200.  *
201. */
202. require_once BASEPATH.'core/CodeIgniter.php' ;
203.
204. /* End of file index.php */
205. /* Location: ./index.php */
```

1. mvc/9/README
- 2.
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- 8.
9. Improves upon mvc/8 by introducing a framework (CodeIgniter).
- 10.
11. application/
 12. config/
 13. config.php - CodeIgniter's configuration
 14. routes.php - default routes
 15. ...
 16. controllers/
 17. homepage.php - application controller
 18. views/
 19. homepage/
 20. index.php - a homepage for the course
 21. lecture.php - a lecture
 22. lectures.php - a list of lectures
 23. templates/
 24. footer.php - pages' footer
 25. header.php - pages' header
 26. index.php - front controller
 27. system/
 28. ...