CSIS 3380
Advanced Web Programming with JavaScript & AJAX

HTML Templates

Week 7

Revision

- RESTful API
- JSON
- jQuery
- AJAX

Midterm and assignment 2

- Midterm on week 8
- Assignment 2 due on week 9

HTML Templates

- When developing modern HTML applications, you often write a lot of HTML fragments programmatically

- You concatenate HTML tags and dynamic data, and insert the resulting UI markup into the DOM

```
data.results.forEach(function(user) {
    var name = user.name.first +' '+ user.name.last;
    $users.append('<li>'+name+'</li>');
});
```

- This resulted in coupling of the UI and data logic

- HTML templates address this issue by decoupling the HTML markup from the data

Mustache

- There are many templating engines, mustache, underscores, handlebars, jQuery Template and etc

- Mustache is popular templating engine with no logic, which keeps the template neat

- Mustache is implemented in many languages

- The official website for Mustache is http://mustache.github.io/

- The javascript library can be downloaded at https://github.com/janl/mustache.js/blob/master/mustache.js

- Add mustache.js the same way as how you add jQuery to the page

```
<script src="mustache.js"></script>
```

A simple example

```html
<html>
 <head>
  <title>jQuery Demo</title>

 </head>
 <div id="person"></div>

 <body>
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.js"></script>
  <script src="https://cdnjs.cloudflare.com/ajax/libs/mustache.js/2.3.0/mustache.js"></script>

  <script>
    var data = {

     firstName: "Ed",
     lastName: "Leng"
    };

    var template = "<h1>{{firstName}} {{lastName}}</h1>";
    $(document).ready(function() {

     var html = Mustache.to_html(template, data);
     $('#person').html(html);
    });

  </script>
</body>
</html>
```

An example with an array response

```html
<html>
 <head>
  <title>jQuery Demo</title>
 </head>
 <div id="people"></div>
 <body>
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.js"></script>
  <script src="https://cdnjs.cloudflare.com/ajax/libs/mustache.js/2.3.0/mustache.js"></script>
  <script>
   var data = { people:  [

     { firstName: 'Ed', lastName: 'Leng'},
     { firstName: 'John', lastName: 'Smith'},
     { firstName: 'Joe', lastName: 'Doe'}

   ]};
   var template = '<ul> {{#people}}' +

            '<li>{{firstName}} {{lastName}}</li>' +
            '{{/people}}</ul>';
   $(document).ready(function() {

    var html = Mustache.to_html(template, data);
    $('#people').html(html);

   });
  </script>
 </body>
</html>
```

Nested object

```
<script>
    var data = {
      firstName: "Ed",
      lastName: "Leng",
      address: {
       street: '123 Main st',
       postal_code: 'V2B5J1'
       }
    };
    var template = '<h1>Name: {{firstName}} {{lastName}}</h1>' +
            '<p>Address :{{address.street}} {{address.postal_code}}</p>';
    $(document).ready(function() {
      var html = Mustache.to_html(template, data);
      $('#person').html(html);
    });
</script>
```

Externalized template

```
<script id="personTemplate" type="text/template">
 <h1>Name: {{firstName}} {{lastName}}</h1>
 <p>Address :{{address.street}} {{address.postal_code}}</p>
</script>
<script>
 var data = {
   firstName: "Ed",
   lastName: "Leng",
   address: {
    street: '123 Main st',
    postal_code: 'V2B5J1'
   }
 };
 $(document).ready(function() {
   var template = $('#personTemplate').html();
   var html = Mustache.to_html(template, data);
   $('#person').html(html);
 });
</script>
```

Lab

- Make an AJAX call to https://randomuser.me/api/?results=10 which will returns 10 random people details
- Use Mustache as the templating engine to display the names and emails of the random users returned

- **Name:** romy donker, **Email:** romy.donker@example.com
- **Name:** oya sarıoğlu, **Email:** oya.sarıoğlu@example.com
- **Name:** herbert nelson, **Email:** herbert.nelson@example.com
- **Name:** isabella rose, **Email:** isabella.rose@example.com
- **Name:** jeppe johansen, **Email:** jeppe.johansen@example.com
- **Name:** arndt leicht, **Email:** arndt.leicht@example.com
- **Name:** charlotte watts, **Email:** charlotte.watts@example.com
- **Name:** sophie fields, **Email:** sophie.fields@example.com
- **Name:** umut nalbantoğlu, **Email:** umut.nalbantoğlu@example.com
- **Name:** quim nascimento, **Email:** quim.nascimento@example.com