

# IERG4210, 2014-15 TERM2

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Tutorial 1

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# About this course

- Instructor: Dr. Adonis Fung (phfung@ie.cuhk.edu.hk)
- Lecture: Every Tuesday 3:30-6:15pm (ERB 404)
- Tutorial:
  - T1: Monday, 11:30-12:15, ERB 405
  - T2: Tuesday, 18:30-19:15, ERB 703
- Tutors:
- Benedict Mak
  - Office: SHB 803
  - Office Hours: Tues 1430 – 1515
  - Email: mlt014@ie.cuhk.edu.hk
- Wenrui Diao
  - Office: SHB 801
  - Email: dw013@ie.cuhk.edu.hk

# About this course

- Please find all the course information on <https://ierg4210.github.io/web/index.html>
- And also notice Facebook Group “IERG4210 - 2014-15 Spring, CUHK”
- <https://www.facebook.com/groups/ierg4210.2015spring/>

# About this course

- Assignments 40%
- Quizzes 10%
- Final Exam 50%

# Assignment

- Write an e-Commerce website with PayPal payment gateway by JavaScript and NodeJs
- Unlike many other sources you found on Internet, your assignment is not written in PHP or C#.
- And you website should be protected from well-known attacks (e.g. CSRF, SQL injection)

# Assignment

- There are 7 phases.
- For each phase, you need to submit your source code and link to related webpage to us.
- Last phase is peer-hacking.
  - You get marks when you can hack your classmate, and he will lose marks
  - Get back some marks when the bug is fixed.
- Deadlines are firm.
- If you submit earlier in the first 4 phases, you may enjoy extension in the later phase.
- Details to be announced later.

# Assignment inspection

- To make sure you can and have completed the basic parts.
- Tutors will randomly pick some of the students' works for inspection.

# Assignment inspection

- If we find that you cannot get 50% of the requirements in a submission, you MUST give a **midterm demo**.
- Try your best to finish the assignments on time.
- Time of midterm demo to be decided.





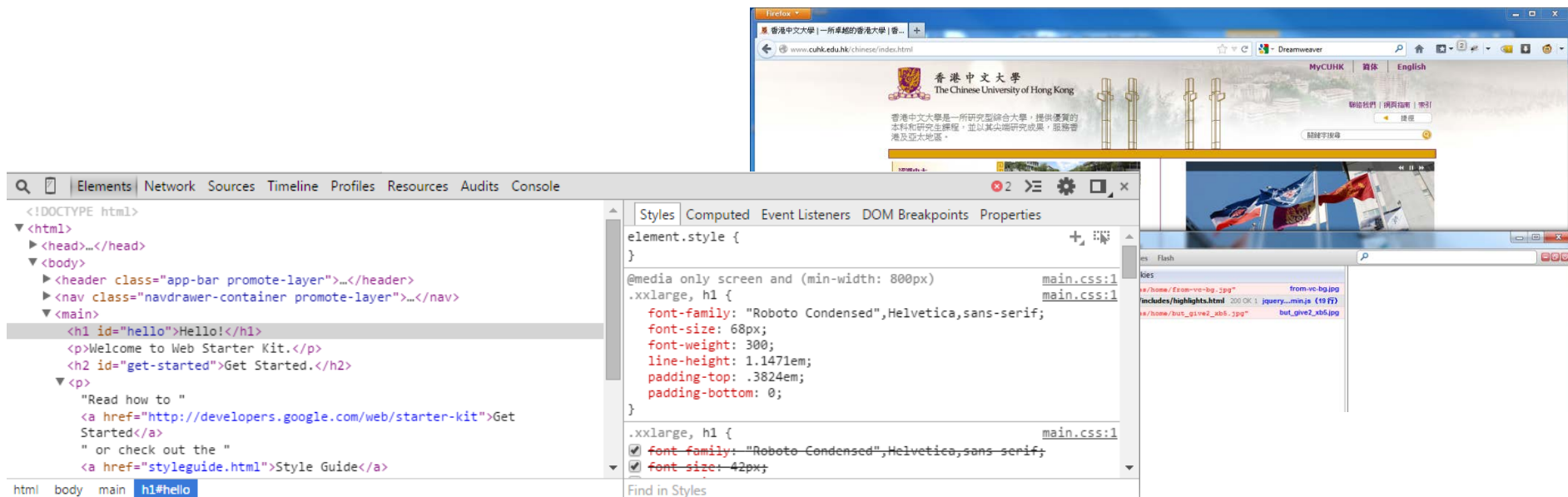
# Some useful tools

- To control the Amazon EC2 web server (<http://aws.amazon.com/ec2/>), you need SSH/telnet client on your machine
- Pick a region near you (Singapore / Tokyo)
- Create the free tier instance, upgrade it when necessary
- Download and put the key it gave in a save place
  
- For Windows:
  - Putty or SSH Secure Shell Client
- For Mac OS:
- Open the Terminal under the utilities folder
  - Type the ssh command:  

```
sudo ssh -i "key.pem" -l "ec2-user"  
"server_ip_address"
```

# Some useful tools

- To check if your website is performed as expected, finding errors, or debugging, we may use:
  - Firefox + Firebug
  - Chrome Developer Tools (press F12)



# Some useful tools

- You can check the source codes, files downloaded, requests and responses made, etc.
- It also has many debugging features like setting break points on JavaScript.

# Some useful tools

- JSFiddle (<http://jsfiddle.net/>)
  - Can show how your Javascript, HTML, CSS codes work and look like in real-time
  - Can include different libraries
  - Can share among your friends

The screenshot displays the JSFiddle web application interface. The top navigation bar includes the JSFiddle logo, a 'Run' button, and options for 'Update', 'Fork', 'TidyUp', 'JSHint', 'Share', and 'Login/Sign up'. On the left side, there is a 'Choose Framework' section with dropdown menus for 'onLoad' and 'jQuery 1.9.1', and checkboxes for 'Migrate 1.1.0', 'jQuery UI 1.9.2', 'jQuery Mobile 1.3.0b1', and 'jQuery Mobile 1.2.0'. Below this is a section for '<script> tag attributes' and a checked option for 'Normalized CSS'. The main area is divided into three code editors: 'HTML' (top left), 'CSS' (top right), and 'JavaScript' (bottom left). The HTML editor contains the following code:

```
1 <h1>jQuery Expandable Plugin Example2</h1>
2
3 <p>This example uses default settings. Just start
4 typing in the text area below and watch it expand.</p>
5 <textarea name="example"></textarea>
```

The CSS editor contains:

```
1 <style type="text/css" media="screen">
2   body { font: 15px "Lucida Grande", "Lucida
3   Sans Unicode", Helvetica, Arial, Verdana, sans-serif;
4   color:red; background: #fff; }
5   h1 { font-size: 30px; }
6   textarea { font-size:16px; color: #ff0000; }
```

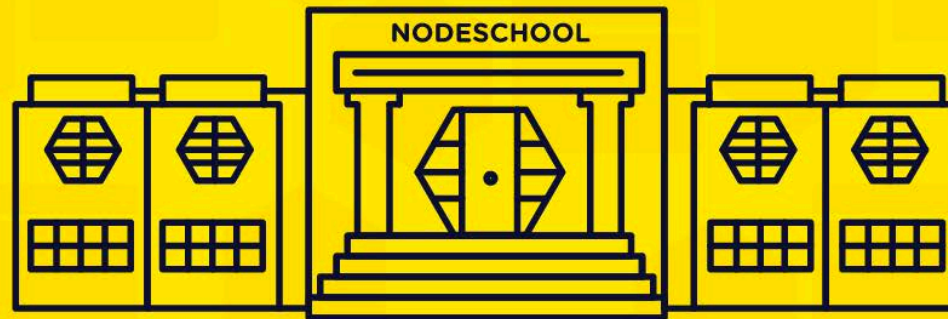
The JavaScript editor contains:

```
1 /*! Copyright (c) 2013 Brandon Aaron
2 (http://brandonaaron.net)
3 * Licensed under the MIT License (LICENSE.txt).
4 *
5 * Version 1.1.3
6 *
7 * Contributions by:
8 * - Karl Swedberg
9 * - Pistos
10 */
11 (function (factory) {
12   if (typeof define === 'function' && define.amd) {
13     // AMD. Register as an anonymous module.
14     define(['jquery'], factory);
15   } else {
16     // Browser globals
17     factory(jQuery);
```

The right side of the interface shows the 'Result' of the code execution. The title is 'jQuery Expandable Plugin Example2'. The main content area displays the rendered HTML, which includes the text 'This example uses default settings. Just start typing in the text area below and watch it expand.' Below this text is a text area containing the text 'will this respond and it does to changes in CSS and HTML . What will happen as I type to the end of the text area - drat - only scroll bar shows - no automatic expansion as implied'. The text area is styled with a red border and a red background, and it is expanded to show the text.

# Some useful tools

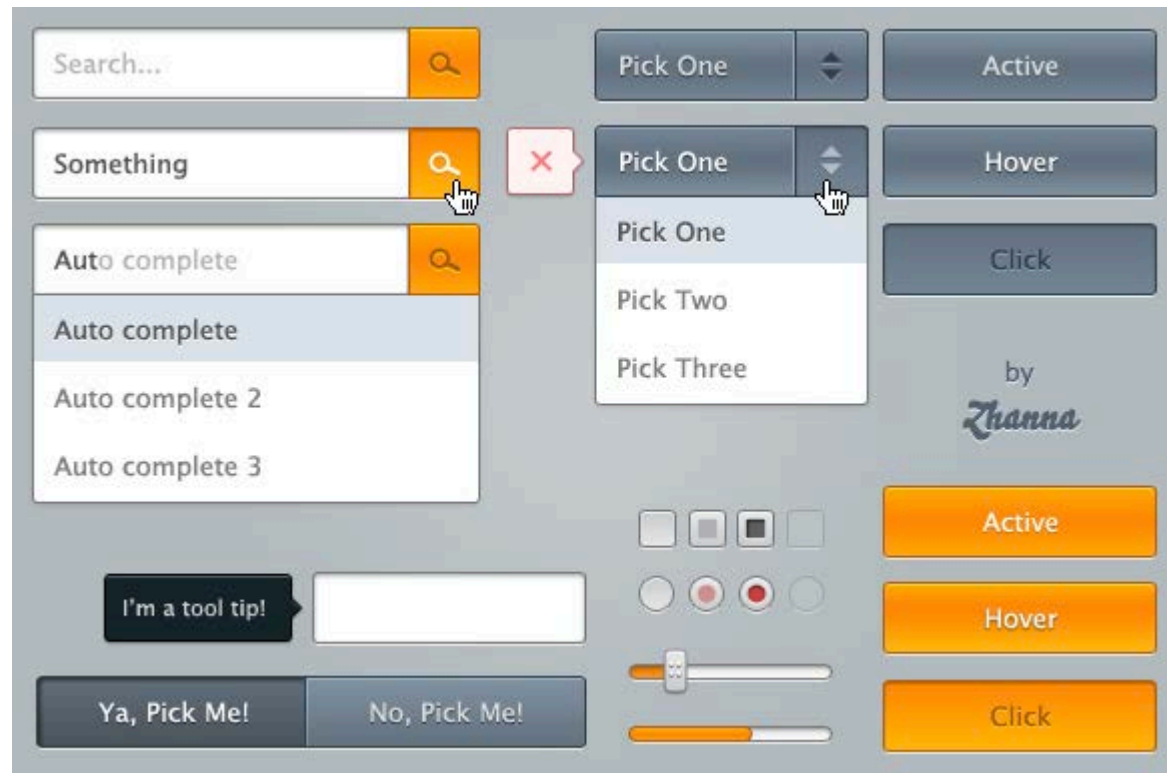
- NodeSchool (<http://nodeschool.io/>)
  - Good place to start learning NodeJS
  - Download and install NodeJS on your own computer or VPS
  - Learn by trying



# NODESCHOOL

# Some useful tools

- jQuery (jquery.com)
  - “Write less, do more”
  - Powerful Libraries that can save you a lot of time
  - Many beautiful interfaces



# Some useful websites

- Mozilla Developer Network ([developer.mozilla.org/](http://developer.mozilla.org/))
- Libraries/Platform Official Website/Docs  
(<http://nodejs.org/api/>) (<http://api.jquery.com/>)
- Stack overflow
- Course's Facebook group
- **Google is your friend.** Justifies the answer you find before following
- Note: Do not ask instructor/tutors for help at late night before trying to solve it yourself



# Q&A

- Any questions?
- Try the tools yourself.
- Work hard in this course