

COMP3322B Modern Technologies on World Wide Web

Lab1: Fundamentals of Web Pages – HTML and CSS

Introduction

In this lab, we are going to develop a simple HKU CS search page. We will practice how to use basic HTML elements and format the webpage using basic CSS styling rules. A screenshot of the finished page is as follows:



Note: The same CSS code may lead to quite different page display on different browsers. We will check your page in the Chrome browser. So you are recommended to use Chrome to develop/test your page as well.

Lab Exercise

[Step1]: Download "**lab1_materials.zip**" from HKU Moodle, and extract it to a folder named "lab1". In this folder, there are two files **index.html** and **style.css**, which are the template files in which you will add more HTML code and CSS code, respectively.

Part 1: Build the HTML page

[Step2 (Page Title)]: In **index.html**, set the title of the page to "**HKU CS Search**".

[Step3 (Logo)]: At the top of the page, there is a division **<div>** with the id of "logo". Make the division clickable, and link back to **index.html** when clicked (using the **<a>** element).

[Step 4 (Search fields)]: In the division **<div>** with id "searchArea" underneath the logo, use the **<form>** element to create a form. Inside the **<form>** element, use **<table>**, **<tr>**, **<td>** to create a 1x4 table (one row and four columns), as shown in the above screenshot. The first cell in the table shows "Let's". The second cell contains a search button implemented using an **<input>** element with type="submit" and value="Search" (the text displayed on the button). The third cell includes an input textbox, where the search string is to be entered; set the "name" attribute of the input textbox to "q". The fourth cell contains "in **cs.hku.hk" (cs.hku.hk will be in bold font) and an **<input>** element with the input type of "hidden" (refer to http://www.w3schools.com/tags/att_input_type.asp); set the "name" attribute of the hidden input field to "as_sitesearch" and the "value" attribute to "cs.hku.hk", which provides the search domain parameter to Google server. (You can learn more about Google search parameters at <https://moz.com/ugc/the-ultimate-guide-to-the-google-search-parameters>).**

Set the "**method**" attribute of the form (the HTTP request method) to "**get**", and "**action**" attribute of the form to "<https://www.google.com/search>" (where the form data will be sent when the search button is clicked). Then after you type the search string and click the search button, an HTTP request carrying the URL https://www.google.com/search?q=yoursearchstring&as_sitesearch=cs.hku.hk&... (additional parameters might be appended by your browser) will be sent to the Google server, and a Google result page corresponding to your input and search domain parameter will appear.

[Step5 (Events)]: Underneath the search table, there is a division **<div>** with class "events". In this division, please first use **<h3>** to create an event header with content "Upcoming events", then use ****, ****, and **<a>** elements to implement an event list, including three list items as follows. All three list items should be hypertexts (excluding the date parts). The mapping between list items and links is as follows:

List Item	Hyperlink
Journey of Hong Kong Towards a Smart City.	https://www.cs.hku.hk/seminars/2019/20190128.jpg
Visual Perception and Control of Intelligent Vehicles and Robotics	https://www.cs.hku.hk/seminars/2019/20190129.jpg
Deep Learning for Visual Perception: Algorithms, Applications and Theory	https://www.cs.hku.hk/seminars/2019/20190130.pdf

[Step 6 (Image)]: Add an element `` with class "image", and set its "src" attribute value to "declared_main_building.jpg".

[Step 7 (Contact Information)]: At the bottom of the page, there is a `<div>` with id "footer". In this division, add a `<h3>` element containing "HKUCS website - Feedback, Web accessibility", and two `<p>` elements to show the following two lines of contact information.

Email: webadm@hku.hk
Telephone: (+852) 3917 0123

In addition, make the Email address a hyperlink (using the `<a>` element) and when you click the email address, a mail client should be invoked (Hint: use "mailto:" in the href attribute of the `<a>` element; see https://www.w3schools.com/tags/att_a_href.asp).

Your page will look as follows after you have done the above steps:

Let's in [cs.hku.hk](https://www.cs.hku.hk)

Upcoming events

- Jan 28, 2019
[Journey of Hong Kong Towards a Smart City](#)
- Jan 29, 2019
[Visual Perception and Control of Intelligent Vehicles and Robotics](#)
- Jan 30, 2019
[Deep Learning for Visual Perception: Algorithms, Applications and Theory](#)



HKUCS website - Feedback, Web accessibility

Email: webadm@hku.hk

Telephone: (+852) 3917 0123

Part 2: Improve the page appearance using CSS styling

[Step 8 (linking to css file)]: Add the following in the **<head>** element in **index.html**, such that the html page will be styled by the styling rules in **style.css**.

<code><link rel="stylesheet" href="style.css" type="text/css"></code>

[Step 9 (logo)]: In "**lab1_materials.zip**", you can find a HKUCS logo image (**logo.jpg**). Set the image as the background of the "logo" division (Hint: use "background-image" http://www.w3schools.com/cssref/pr_background-image.asp and other relevant background properties to achieve the look as in the screenshot). Set the width of the "logo" division to 100%, height to 130px. Position the image to the left of the page with a 20px margin (Hint: set "margin-left" of the division to 20px).

[Step 10 (Search textbox and button)]: Set the width of the search input textbox to 350px, height to 30px, border width to 1px, border style of dashed with color "red". The font size of the input text should be 20px.

Set the width and height of the search button to 160px and 30px, respectively, the background color of the search button to "lightskyblue", the font of the text on the search button to bold, italic, 16px with a black color. There is no border for the search button.

[Step11 (Table)]: Set the background color of each cell to "lightgrey" and height to 60px, width to 177px. Set the font size of "Let's" and "in cs.hku.hk" to "x-large" (http://www.w3schools.com/cssref/pr_font_font-size.asp). Change the background color of a cell to "darkgrey" when the cursor moves over it.

Set a left margin of 20px for the table.

[Step 12 (Event List)]: In the "events" class, set the float to "left", so that the image can be shown on the right of the event list; then set the margin-left to 20px, display to inline-block and width to 500px. Remove underline of the hypertexts (Hint: use "text-decoration: none" on the **<a>** element in the list only).

[Step 13 (Image)]: Set the width of the image to 392px, height 300px, and a left margin of 10px.

[Step 14 (Footer)]: Set the background color of the footer division to "lightsalmon". Set its position property to "absolute", bottom to 0px, left to 0px, right to 0 px and padding to 1 rem.

Upload and Test

Uploading Method ONE:

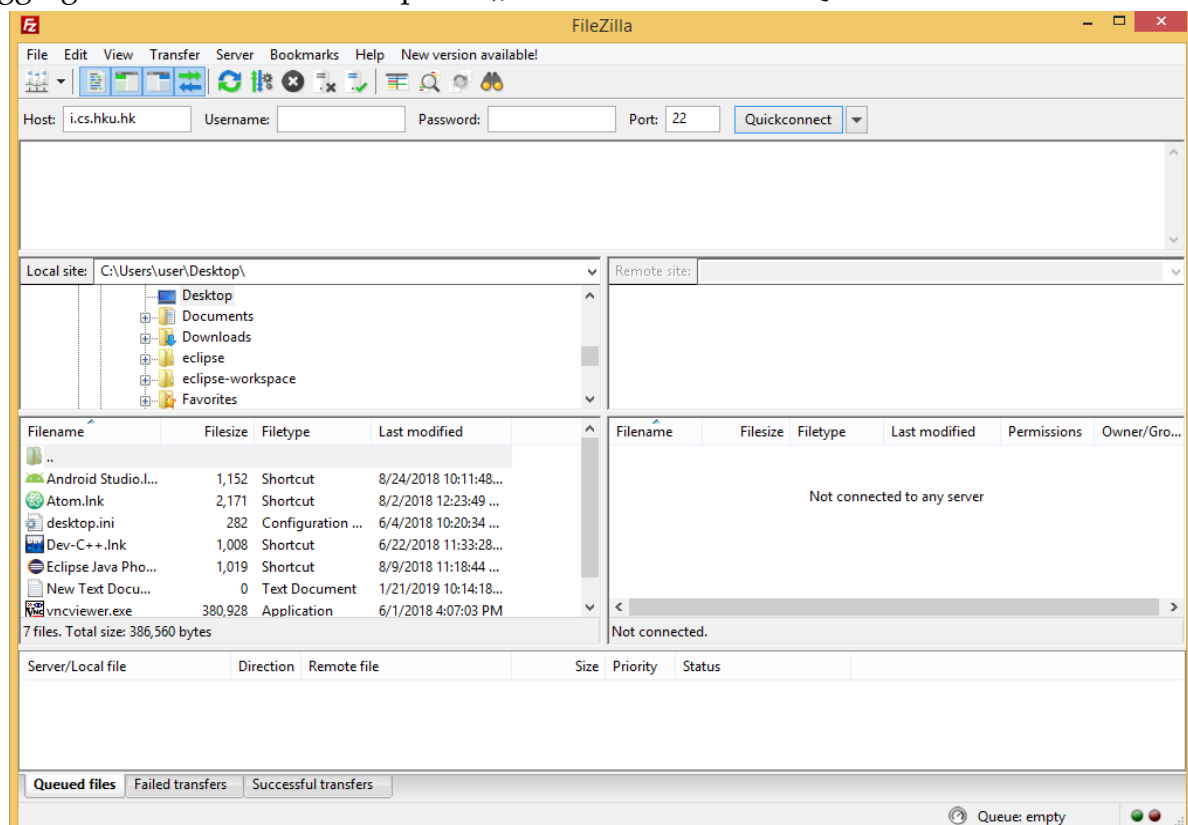
In HW311/312, after you log into a computer, a network shared drive will be shown in "My Computer", and your "lab1" folder can be directly copied to the "**public_html**" folder in the shared drive.

Uploading Method TWO:

Upload your lab1 folder including all your files to i.cs.hku.hk using an FTP software (you can do it in the HW labs following the steps below; otherwise, you need to first tunnel through gatekeeper.cs.hku.hk using your csid)

Step1: Launch "FileZilla Client" on HW311/312 computers (a FTP client).

Step2: Type in Host Name as i.cs.hku.hk, User Name as your CSID (which is used for logging onto HW311/312 computers), Port as 22. Click the Quickconnect icon.



Step3: You can drag and drop the entire folder lab1 from your machine to the "public_html" directory. This will upload all the files in the lab1 folder from your machine to the "public_html" folder in your own account directory in the i.cs.hku.hk server. By doing that, your web page is hosted on i.cs.hku.hk web server and will be accessible with a browser.

Filename	Filesize	Filetype	Last modified		Filename	Filesize	Filetype	Last modified	Permissions
C:		File folder			..				
D:		File folder			public_h...		File folder	1/21/2019 10:1...	drwxr-x---
E:		File folder							
F: (\\172.16.0.16...		File folder							
H: (\\172.16.0.16...		File folder							
P: (\\smbaprint...		File folder							
W: (\\172.16.0.1...		File folder							

Browse and test your webpage at (make sure you test your page after uploading it to i.cs.hku.hk):

[http://i.cs.hku.hk/~\[your_CSID\]/lab1/index.html](http://i.cs.hku.hk/~[your_CSID]/lab1/index.html)

Submission:

Please finish this lab exercise **before 11:55pm Jan 27 (Sunday)**. We will go to your individual webpage at [http://i.cs.hku.hk/~\[your_CSID\]/lab1/index.html](http://i.cs.hku.hk/~[your_CSID]/lab1/index.html) to check your page. If the page is correctly implemented, you will get the "1" mark for this lab exercise.