Lab 1 A Basic Static Page

CSCI2720 Building Web Applications



- A good text editor
- A no-frill HTML5 file
- Basic styling with CSS3
- Bootstrap
 - Basic components
 - Special nav, table, lists
 - Float and flex
 - Responsive columns
- Responsive web design

A good text editor

- Too many to choose from!
- Check:
 - Syntax highlighting?
 - Tooltips?
 - Version control?
- Pick for yourself
 - ■E.g. Vim, NotePad++, Atom, ...
 - You cannot install without admin rights in CSE computers
 - Get Portable Version of NotePad++ or Sublime Text etc.

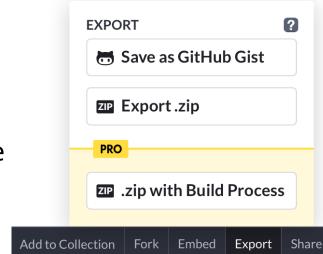
May I use Codepen?

- Codepen.io is a useful platform for coding and testing
- We won't forbid you to be lazy and use this instead of a proper text editor (like a developer...)

To get the HTML/CSS files, save

your pen and you can see "Export" at the bottom to download *αs .zip*

The files are inside the "dist" folder in the zip file



A no-frill HTML5 file

- Create an HTML file to describe yourself, using...
 - Heading
 - Paragraph
 - List
 - Table
 - Image
 - Flexbox / Grid
 - •Others (e.g. <time>, ©, ...)

I'm Chuck-jee Chau

Computer Science & Engineering Heading 4

- About
- Courses
- Links
 Response Web

List: Links to anchors

Heading 1

About Me



Image/Picture

Paragraph

Hi there! I'm a lecturer in the Department of Computer Science and Engineering, CUHK. A few (?!) years ago, I was graduated from here as well! It's very nice to meet you all.

My hobbies

Piano Computer Music Web Design?! Hiking

Flexbox

My Courses

Course code Contents CSCI2720 Building Web Apps ENGG1000 IT Foundation

ENGG1110 Problem Solving with Programming

Table

Interesting Links

- Blackboard
- CSE Depr
- CUHK

Links

This website was built on 2018-09-13. @ Chuck-jee Chau

Check out my sample page:

http://www.cse.cuhk.edu.hk/~chuckjee/272olab1/index-nocss.html

View the source code, but don't just copy!

CSCl2720 Lab 1

For example...

HTML₅ semantics

- Use semantic elements
 - <article>
 - •<header>
 - "<main>
 - nav>
 - <<section>
 - <footer>

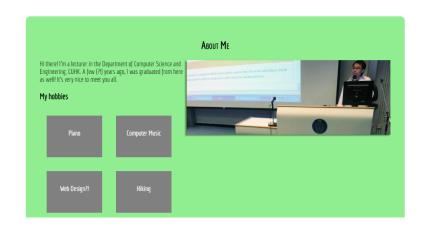
Basic styling with CSS3

- Now, style your page!
 - Start from something simple and easy...
 - Internal vs. external?

```
p {
  color: grey;
  padding: 5px;
}
```

- Try to do these:
 - Wide header and sections
 - Header background image
 - Nav horizontal link items
 - Web Font
 - e.g. <u>https://fonts.google.com</u>
- No idea? See: <u>https://www.w3schools.com/css</u>

For example...



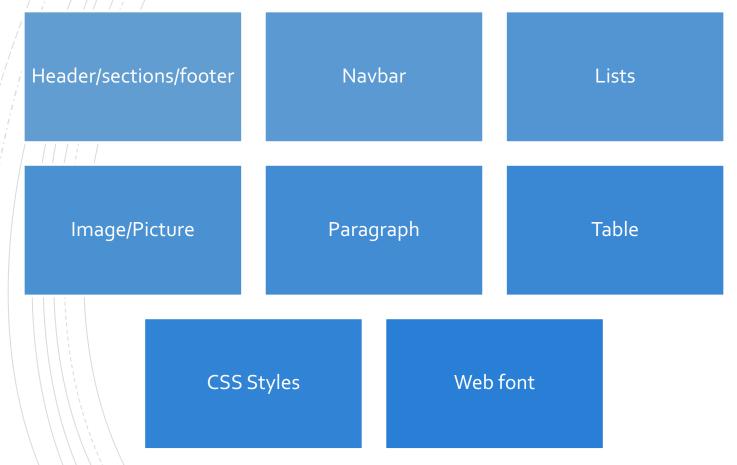
	My Courses
Course code	Contents
CSCI2720	Building Web Apps
ENGG1000	IT Foundation
ENGG1110	Problem Solving with Programming

Check out my sample page (both html and css):

http://www.cse.cuhk.edu.hk/~chuckjee/272olab1/index.html

View the source code, but don't just copy!

By now, you should already have...



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Adding Bootstrap for CSS

- You don't need to remove the current CSS styles
 - Of course, you may useBootstrap to replace them
- Now add this to the <head> section of the HTML file

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0beta1/dist/css/bootstrap.min.css" rel="stylesheet"
integrity="sha384giJF6kkoqNQ00vy+HMDP7azOuL0xtbfIcaT9wjKHr8RbDVddVHyTfAAsrekw
KmP1" crossorigin="anonymous">

https://getbootstrap.com/docs/5.o/gettingstarted/introduction

If you are not able to copy the text, use Chrome to open this PDF!

Basic components

- Bootstrap applies all styles using class
- Try and apply some of these classes to your header/nav/section/footer/...
 - Text/background color: text-dark / text-secondary / bg-primary / bg-info / ...
 - *Margin/padding:* m-2/ml-3/p-2/py-5/...
 - Text alignment/decoration: text-center / text-right / font- italic / ...
 - https://www.w3schools.com/bootstrap4/bootstrap_utilities.asp

Navbar

- You can always add more styling classes
 - https://getbootstrap.com/docs/5.o/components/navbar
- Table

- Add more styles!
 - https://getbootstrap.com/docs/5.o/content/tables
- List
 - https://getbootstrap.com/docs/5.o/components/list-group
 CSC12720 lab

Special components

Float and flex

Your image may originally be floating using CSS

```
<img style="float:right">
```

You can do the same using Bootstrap classes

```
<img class="float-right">
```

<u>https://getbootstrap.com/docs/5.o/utilities/float</u>

- Similary, the d-flex class represents display:flex in CSS
- https://getbootstrap.com/docs/5.o/utilities/flex
- For consistency and convenience
 - Everything about styling is applied with classes

In Bootstrap, a container is always divided into **12 columns**

6 + 6 + 3 + 2

This can be done by introducing a container div, and apply the col-* class to the contents

```
<div class="container">
    <section ... class="col-3"></section>
    <section ... class="col-6"></section>
    <section ... class="col-3"></section>
    </div>
```

https://getbootstrap.com/docs/5.o/layout/grid

Responsive columns

Responsive columns

- You can then adjust the proportion for the columns depending on screen width, e.g.
 - Phone in portrait: stacked up (no columns, auto!)
 - Phone in landscpae: **4+4+4**
 - Tablet: 3+6+3
 - Very large screen: **2+8+2**

```
<div class="row">
    <section ... class="col-sm-4 col-md-3 col-xl-2"></section>
    <section ... class="col-sm-4 col-md-6 col-xl-8"></section>
    <section ... class="col-sm-4 col-md-3 col-xl-2"></section>
    </div>
```

- https://getbootstrap.com/docs/5.o/layout/breakpoints
- These breakpoint settings can also be applied on many other classes, e.g. p-sm-2, float-md-left, shadow-lg

For example...



Check out my sample page and resize the browser window: http://www.cse.cuhk.edu.hk/~chuckjee/2720lab1/index2.html

View the source code, but don't just copy!

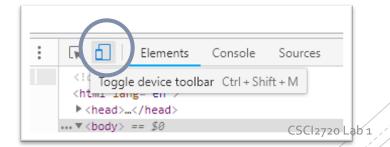
Responsive Web Design

- Then, please implement a few of these RWD elements
 - Choose image based on screen width
 - Different CSS rules with media queries for screen size
 - Auto-fit background image
 - ... and more!

Please describe what you have done in a separate section

Testing RWD

- •Please use Google Chrome for the labs!
- Utilize the **Developer Tools** for details of the source code
 and various diagnostics
- •Preview rendering results on smaller screens:



Publishing your page

- If you want to share a page with HTML code, you need to host it on a web server, e.g.
 - CSE server (see Appendix)
 - Outside services
 - GitHub Pages
 - ■AWS: Amazon S₃
 - Netlify
 - and many more possibilities...

Optional:

Using Netlify

- You may try publishing your static personal page using Netlify
- Open an account at <u>www.netlify.com</u> (choose the free account!)
- 2. Read this if you know GitHub:

 https://www.netlify.com/blog/2016/10/27/a-step-by-step-quide-deploying-a-static-site-or-single-page-app/
- 3. If you are not sure about GitHub, simply upload your files to https://app.netlify.com/drop
- You can now access your site using https://(sitename).netlify.app, e.g.
 - https://chuckjee.netlify.app
- Note: We have no affiliation with the company, and this step of publishing is optional for your reference only

Submission

- No submission is needed for labs
- What you have done for this lab will be useful, including:
 - Basic page with Bootstrap
 - Bootstrap margin/padding
 - Responsive columns
- Please keep your own file safely
- P.S. For CSE account issues, please contact admin @SHB1001, or email techteam@cse.cuhk.edu.hk using your @cse or @link account

Appendix:

Personal accounts

- You may try the CSE account if you are a CS/CE student
- SSH/SFTP to CSE server
 - SSH Client in lab
 (S:\SSH3.2.9\SshClient.exe)
 - 2. Connect to
 linux2.cse.cuhk.edu.hk
 - If outside CUHK network, connect to gw.cse.cuhk.edu.hk, then type ssh linux2
 - 3. New File Transfer Window
 - For your own computer:
 - E.g. MobaXterm, WinSCP, FileZilla, CyberDuck, ...



Appendix:

Uploading for CSE account

- Your page can be previewed locally by opening in browser
- Try putting it onto the CSE web server!
 - (Save your own work as index.html)
 - 2. On server, create a folder www under your home
 - Check properties of www to set mode as 711 or 755
 - 4. Upload your html file into the www folder
 - Check properties of index.html to set mode as 644
 - 6. Access it at http://appsrv.cse.cuhk.edu.hk/ ~username/index.html
 - Of course, type your own **username**!