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TUNKU ABDUL RAHMAN UNIVERSITY OF  
MANAGEMENT AND TECHNOLOGY

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# 网页编程简介 Introduction to Web Programming

2023-09-09

# 自我介绍

## Self Introduction



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Web Technology (网络技术)

Mobile Technology (移动技术)

Professional Technologist (ICT), **MBOT, Malaysia**

Master of Science (Internet Computing), **University of Surrey, UK**

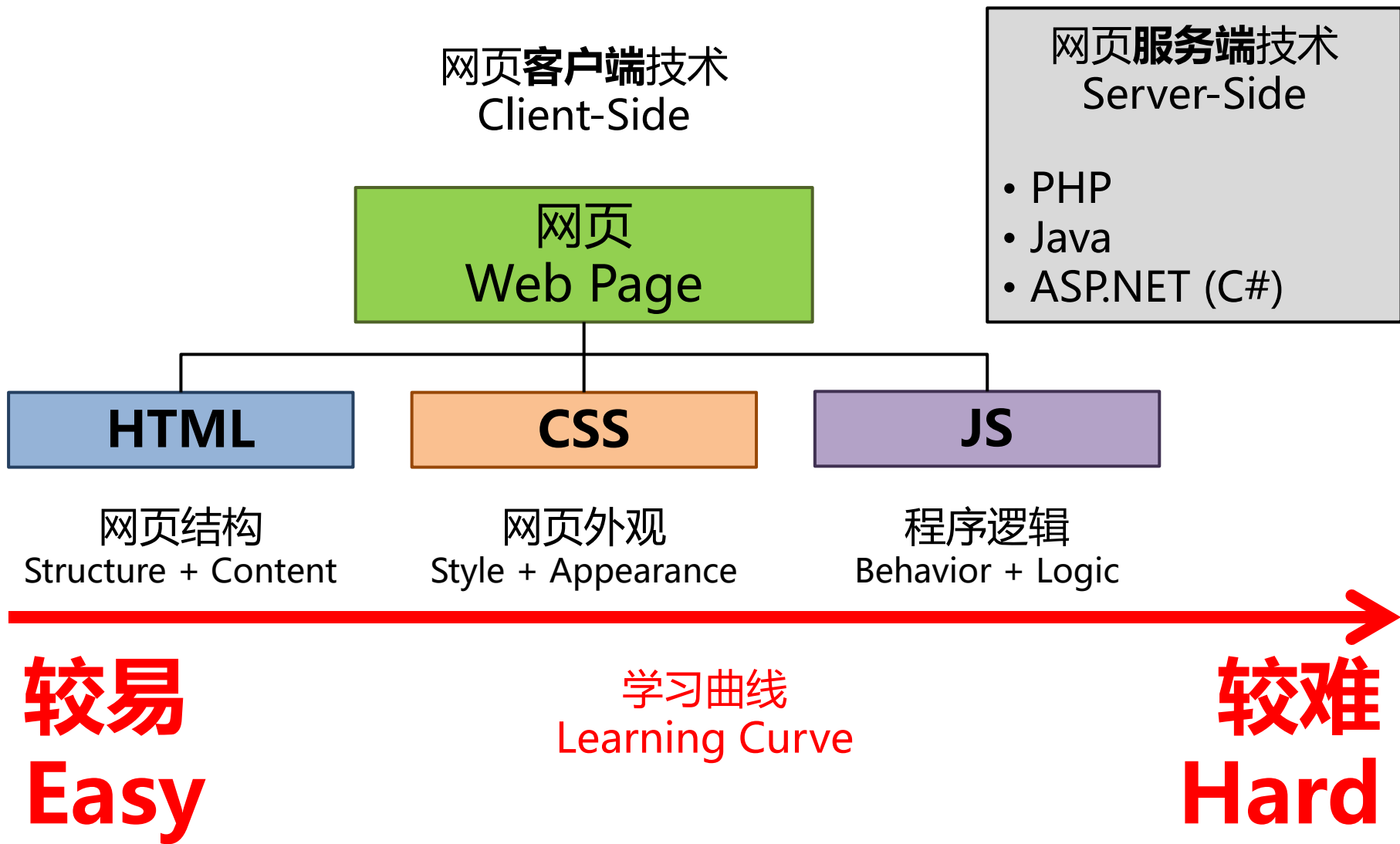
Bachelor of Science (Information Systems Engineering), **Campbell University, USA**

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Diploma in Science (Information Systems Engineering), **TARC, Malaysia**

# 网页的三个基本技术

## The 3 basic technologies of web page





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HTML



```
<div class="rect"></div>
```

SCSS



```
.rect {  
  background: linear-gradient(  
    -119deg,  
    $gray 0%,  
    $dark-gray 100%); }  
$dark-gray: #333;
```

JS



```
var colors =  
["#74B087", "#DE7300", "#74B087"];  
  
function animate() {};
```

HTML  

1

CSS  

1

JS  

1

1280px

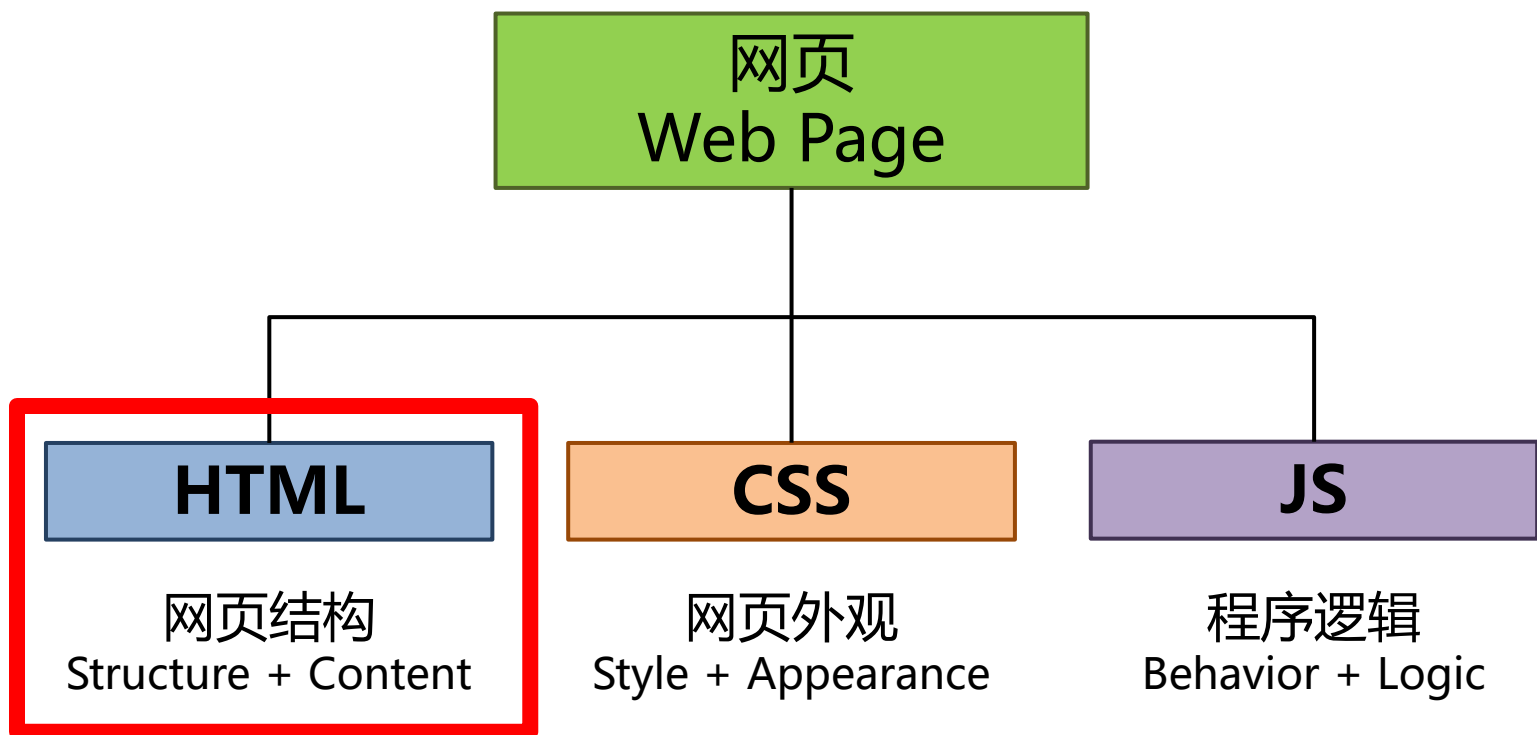
# (A)

## 超文本标记语言

## HTML: Hypertext Markup Language

网页的三个基本技术

The 3 basic technologies for web page





# 超文本标记语言

## HTML: Hypertext Markup Language

### Structure + Content

- 控制网页的**结构**，比如：
  - Heading 标题
  - Paragraph 段落
  - Image 图像
  - 等等...
- 运用**标签 tag** 来创建**元件 element**。
- 标签运用：可分为**双面标签 double-sided** 和**单面标签 single-sided**。



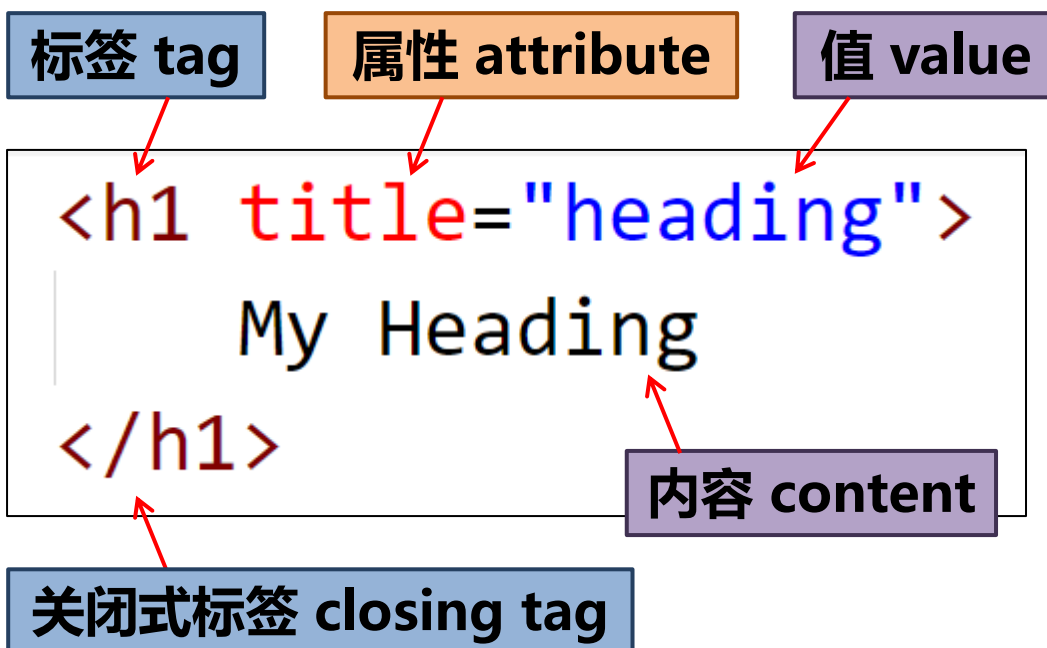
# (A)

## 超文本标记语言

## HTML: Hypertext Markup Language

- **双面标签**：标签**附有**内容，**需要**封闭式标签。

- 例：运用 `<h1>` 标签来创建一个**标题-1 heading-1** 元件。



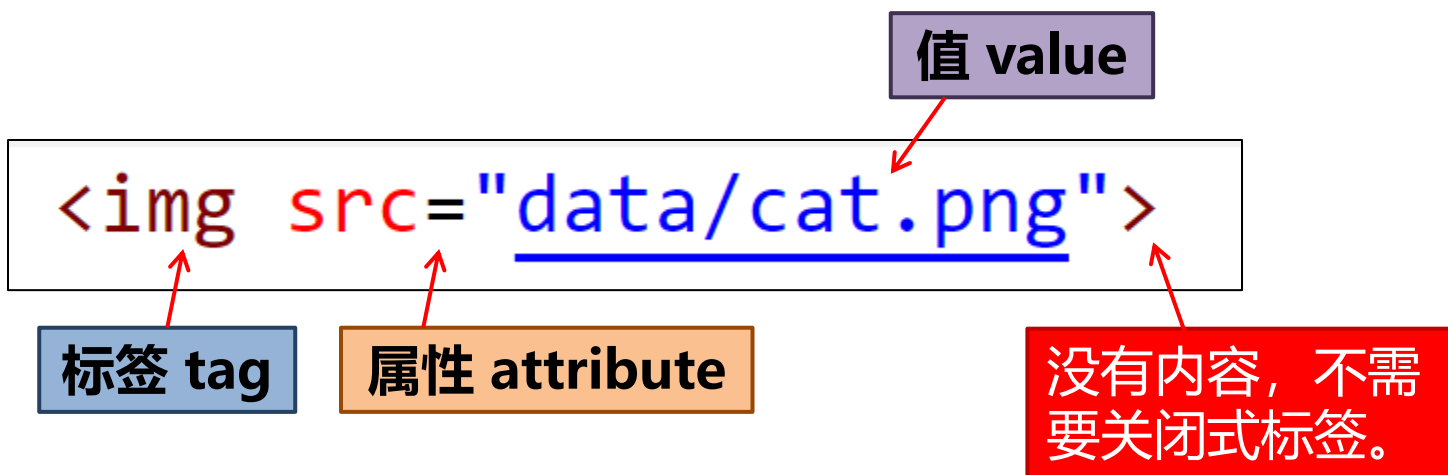
# (A)

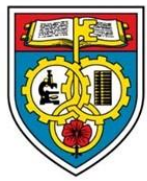
## 超文本标记语言

## HTML: Hypertext Markup Language

- **单面标签**：标签**没有**内容，**不需要**关闭式标签。

- 例：运用 `<img>` 标签来创建一个图像 **image** 元件。





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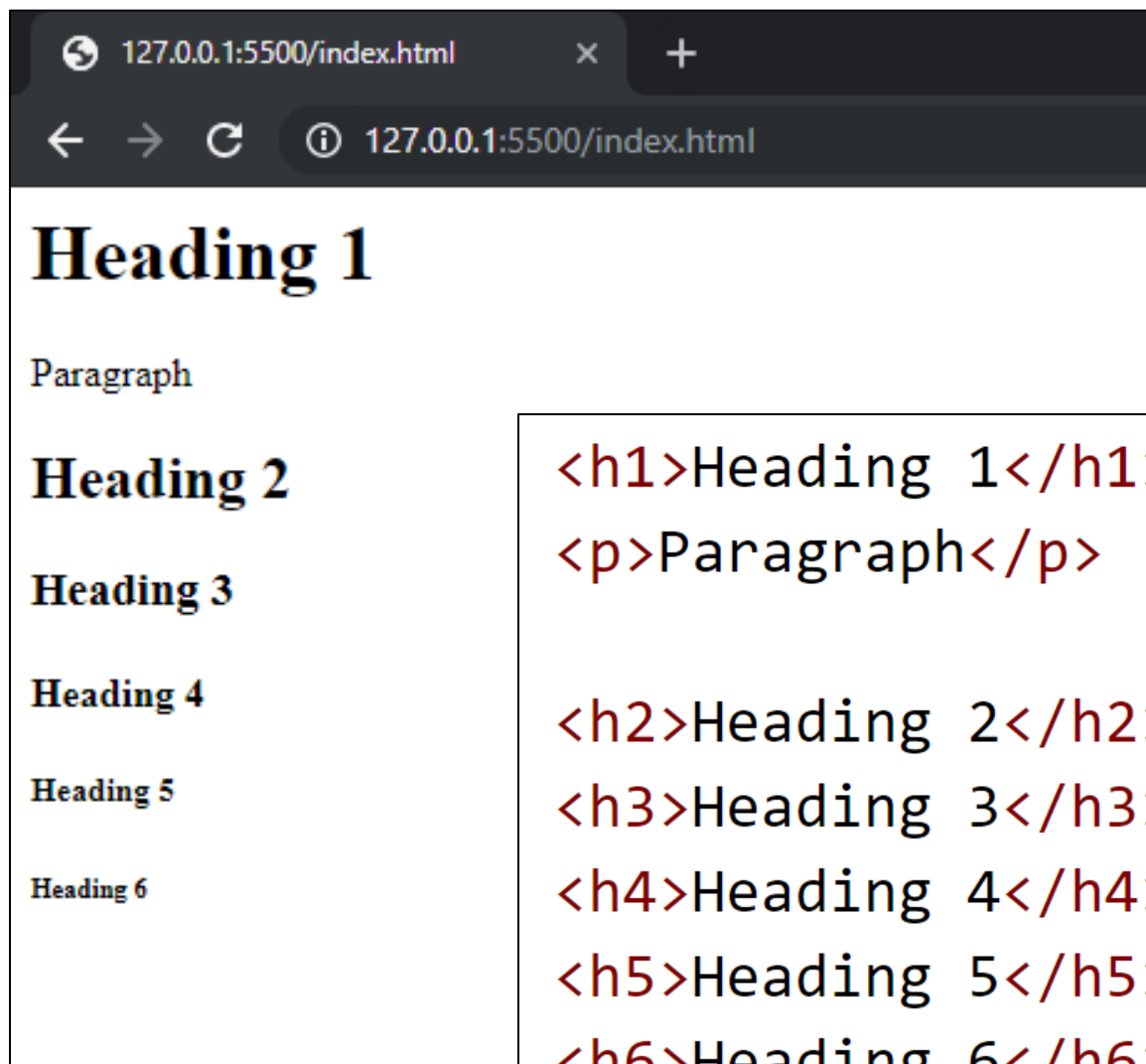
# HTML: 实践时间

## Practical Time

# 注解 A1:

- HTML 支持 6 个标题 heading 层级。

- `<h1>` 最大
- `<h2>`
- `<h3>`
- `<h4>`
- `<h5>`
- `<h6>` 最小



```
<h1>Heading 1</h1>  
<p>Paragraph</p>
```

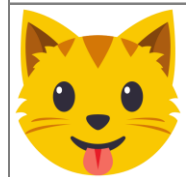
```
<h2>Heading 2</h2>  
<h3>Heading 3</h3>  
<h4>Heading 4</h4>  
<h5>Heading 5</h5>  
<h6>Heading 6</h6>
```

## 注解 A2:

<https://liawcv.github.io>



**bear.png**



**cat.png**



**cow.png**



**dog.png**



**lion.png**



**monkey.png**



**owl.png**



**panda.png**



**penguin.png**



**tiger.png**

## 注解 A3:

- **<h1>...<h6>** = Heading 标题
- **<p>** = Paragraph 段落
- **<a>** = Anchor / Hyperlink 锚 / 超链接
- **<br>** = Break 断行
- **<base>** = Base Path 基路径
- **<img>** = Image 图像
- **<audio>** = Audio 音频
- **<video>** = Video 视频

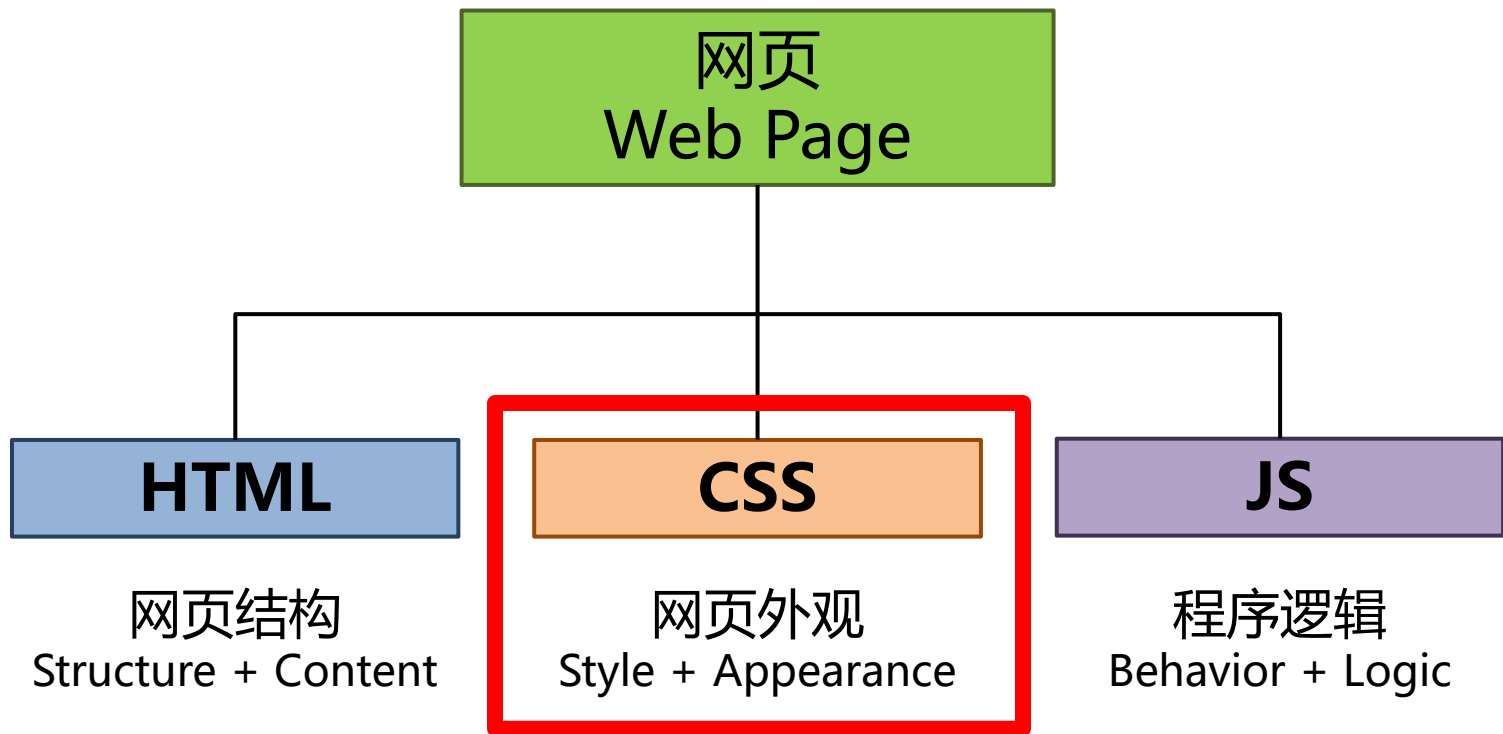
# (B)

## 层叠样式表

## CSS: Cascading Style Sheet

网页的三个基本技术

The 3 basic technologies for web page





## 层叠样式表

## CSS: Cascading Style Sheet

## Style + Appearance

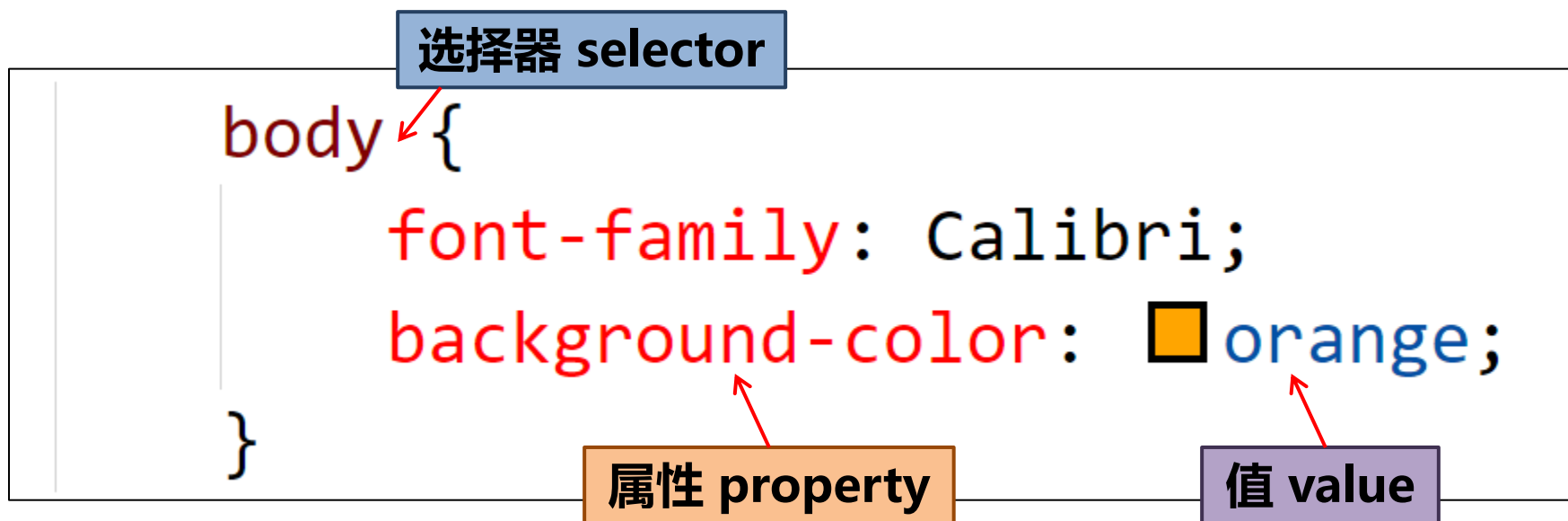
- 控制网页的**外观**，比如：
  - Font 字体
  - Color 字体色调
  - Background color 背景色调
  - 等等...
- 支持基本的：
  - **过渡效果** transition
  - **动画效果** animation

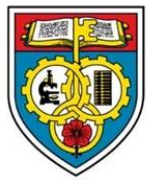


# (B) 层叠样式表

## CSS: Cascading Style Sheet

- 列：为整体网页内容设定  
字体和背景色调。





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# CSS: 实践时间

## Practical Time

## 注解 B1:

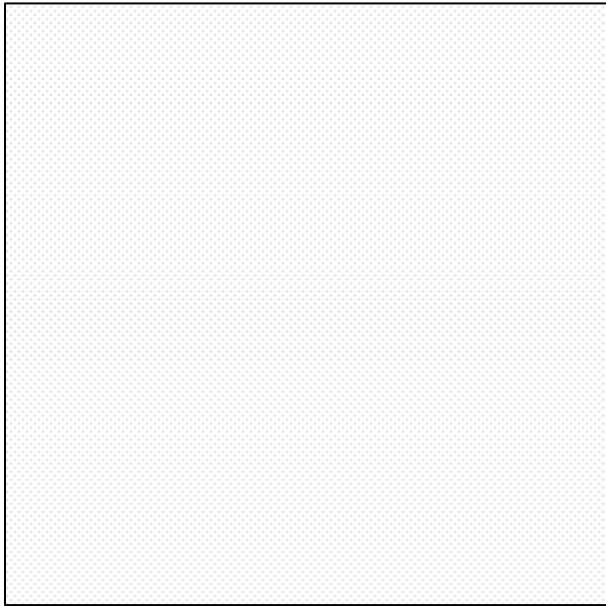
- 电脑作业系统 operating system **支持**的字体均可被使用。
- 一些比较**正式**的字体：
  - font-family: **Calibri**;
  - font-family: **Cambria**;
  - font-family: **Arial**;
  - font-family: **Tahoma**;
  - font-family: **Verdana**;
- 一些比较**特别**的字体：
  - font-family: **Algerian**;
  - font-family: **Broadway**;
  - font-family: **Comic Sans MS**;
  - font-family: **Jokerman**;
  - font-family: **Kristen ITC**;

## 注解 B2:

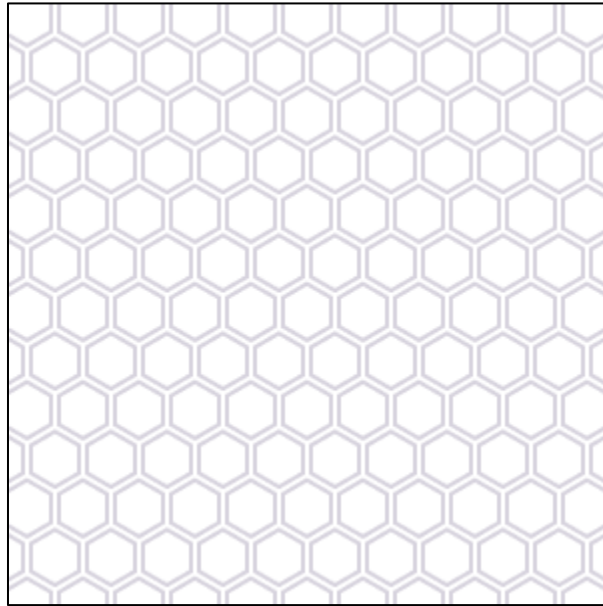
- 像素 pixel (px) 是电脑图像的测量单位。
  - font-size: 60px;      字体大小为 60 像素
- 文本对齐 text-align 可设定为:
  - text-align: left;      向左对齐
  - text-align: center;      中间对齐
  - text-align: right;      向右对齐
  - text-align: justify;      左右对齐

**注解 B3:**

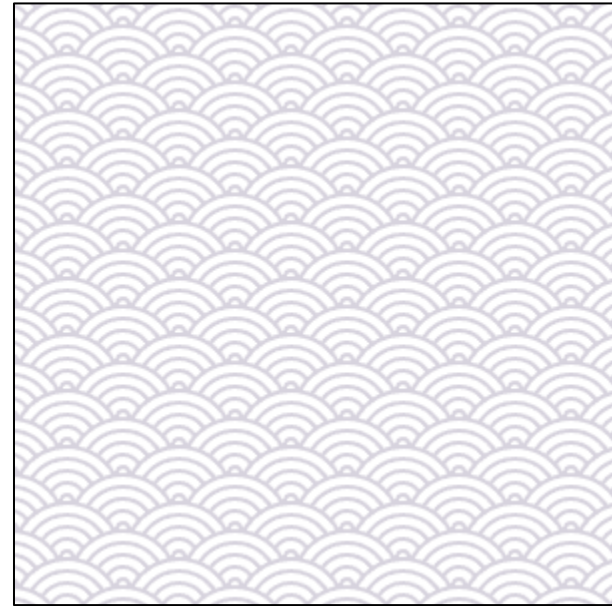
**<https://liawcv.github.io>**



**back1.svg**



**back2.svg**



**back3.svg**

## 注解 B4:

- 边框 **border** 的设定分为 3 部份:

```
border: 5px solid ■ black;
```

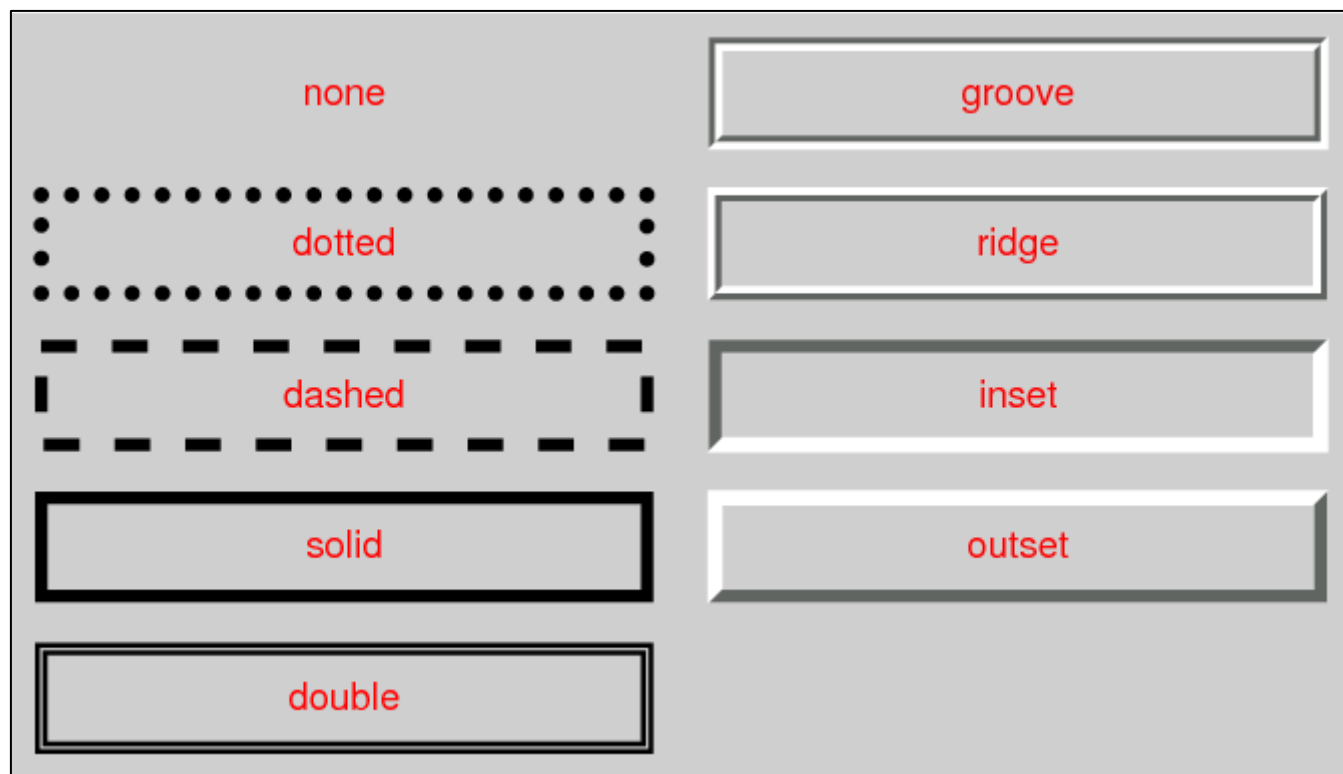
边框大小。

边框样式。

边框色调。

- 其他的**边框样式**:

- dotted
- dashed
- solid
- double
- groove
- ridge
- inset
- outset



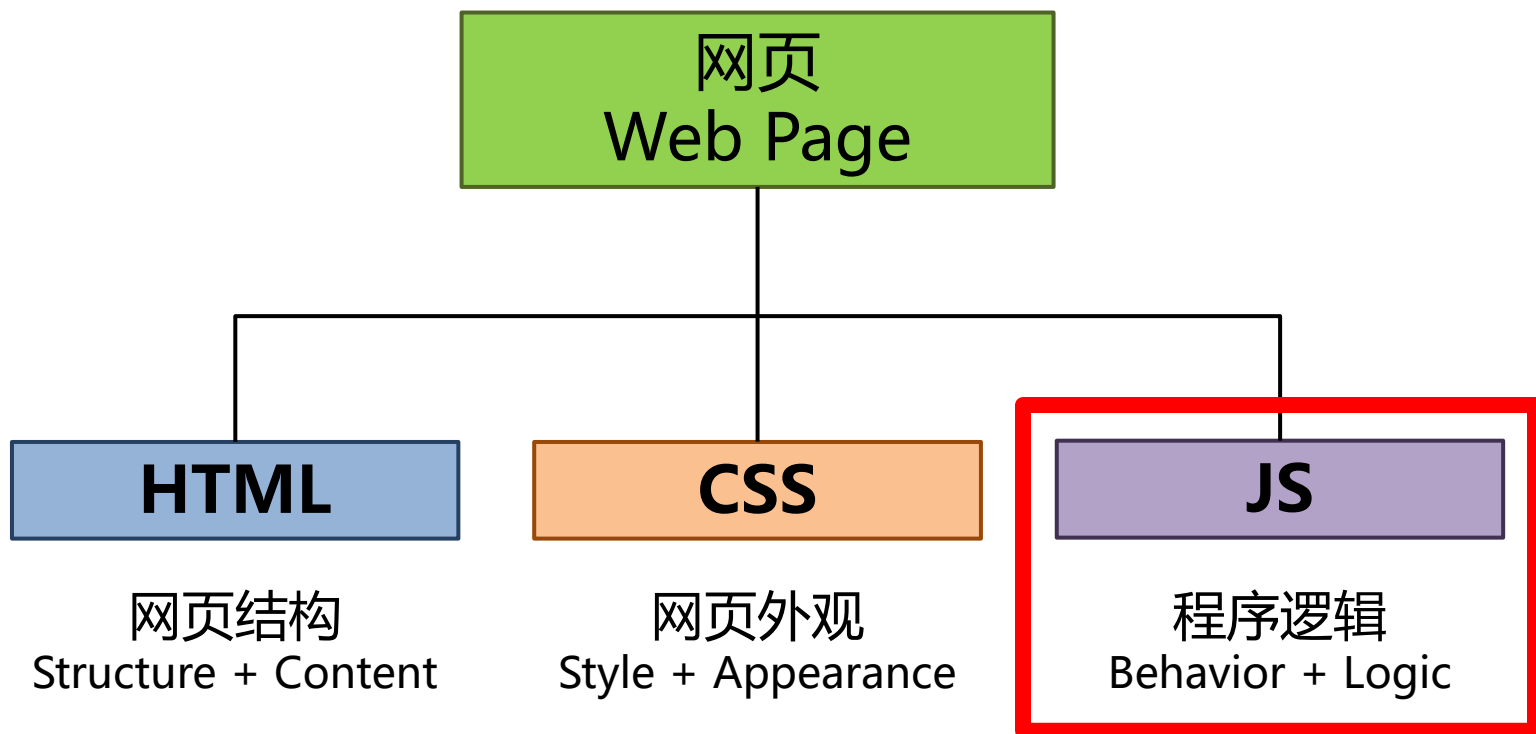


# JavaScript 程序语言

## JS: JavaScript

网页的三个基本技术

The 3 basic technologies for web page





# JavaScript 程序语言

## JS: JavaScript

## Behavior + Logic

- 控制网页的**程序逻辑**，比如：
  - Calculation 运算
  - Dynamic element manipulation 动态元件操作
  - Selection structure 选择结构
  - Loop structure 循环结构
  - Event 事件
  - 等等...

• 列：

变量 variable

值 value

运行内建的 **alert**  
**函数 function** 以  
弹出一个信息框。

函数 function

```
let a = 1;  
let b = 2;  
let c = a + b;
```

运算 calculation

```
alert(c);
```





# JavaScript 程序语言

## JS: JavaScript

### HTML

```
  
  
  
<br>  
  
<audio src="cat.mp3" id="aud1"></audio>  
<audio src="dog.mp3" id="aud2"></audio>
```

在 HTML 给  
元件设定代号。

点击事件发生时  
会被运行的代码。

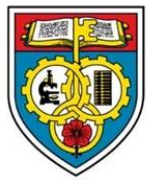
### JS

设定点击事件  
click event.

元件的代号

```
img1.onclick = () => aud1.play();  
img2.onclick = () => aud2.play();
```

播放音频。



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# JS: 实践时间

## Practical Time

# 成品 Result

## HTML

```
1  <base href="//liawcv.github.io">
2
3  <audio src="meow.mp3" controls></audio>
4
5  ▾ <h1 id="h1">Hello World</h1>
6
7  ▾ <p>
8      Welcome to
9  ▾   <a href="//www.tarc.edu.my" target="_blank">TAR UC</a>
10 </p>
11
12 
13 
14
15 <br>
16
17 <audio src="cat.mp3" id="aud1"></audio>
18 <audio src="dog.mp3" id="aud2"></audio>
```

# 成品 Result

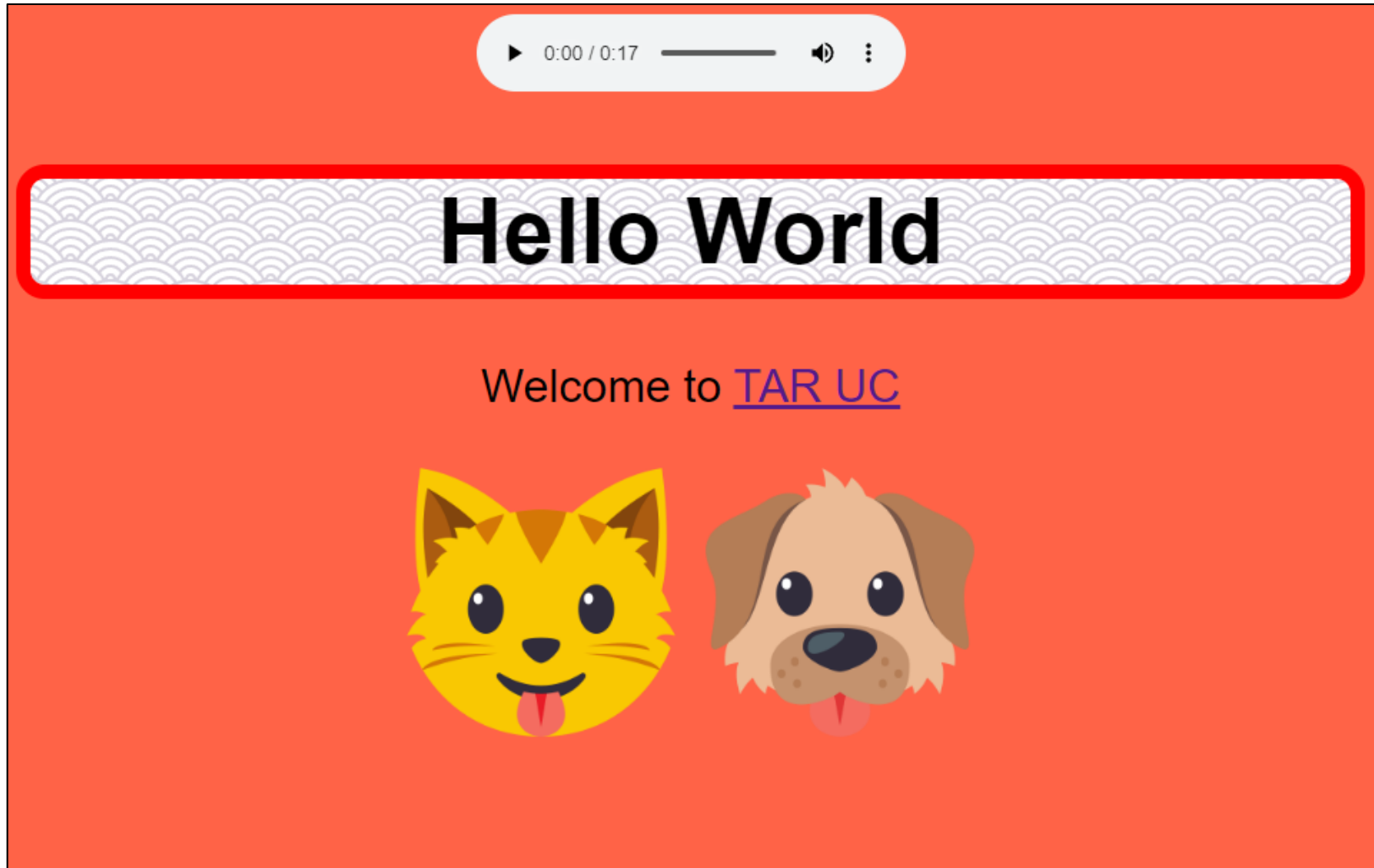
## CSS

```
1 ▾ body {  
2     background: tomato;  
3     font-family: arial;  
4     font-size: 2em;  
5     text-align: center;  
6 }  
7  
8 ▾ h1 {  
9     background: white url(back3.svg);  
10    border: 10px solid red;  
11    border-radius: 20px;  
12 }  
13  
14 ▾ img {  
15     width: 200px;  
16     height: 200px;  
17     transition: 0.5s;  
18 }  
19  
20 ▾ img:hover {  
21     rotate: 10turn;  
22     scale: 2;  
23 }
```

# 成品 Result

JS

```
1  img1.onclick = e => aud1.play();  
2  
3  img2.onclick = e => aud2.play();
```



# 在线参考

## Online Reference

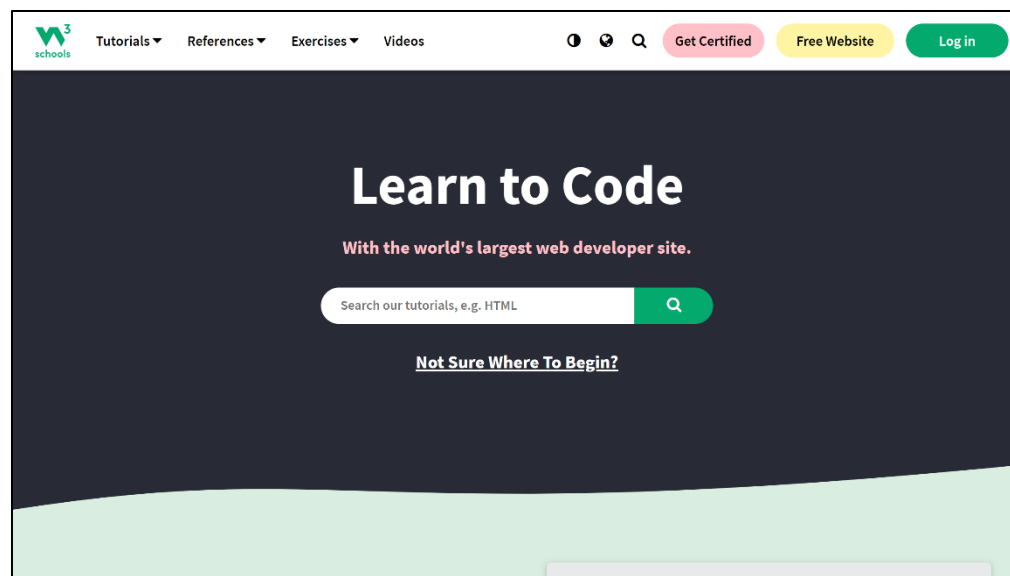
- 点击以下网页链接（英语）：
  - <https://www.w3schools.com>

HTML

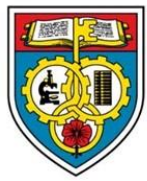
CSS

JS

Others...



- 拉曼理工大学相关科系（英语）：
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# Thank You / 谢谢

## The End