

# INTRODUCTION TO CSS

# CSS ASSOCIATES STYLE RULES WITH HTML ELEMENTS

---

```
p { font-family: Arial; }
```

Selector

Declaration

# CSS PROPERTIES AFFECT HOW ELEMENTS ARE DISPLAYED

---

```
h1 {color: yellow;}
```

Property

Value

# CSS PROPERTIES AFFECT HOW ELEMENTS ARE DISPLAYED

---

```
h1 {  
  color: yellow;  
  font-family: Arial;  
  font-size: 18px;  
}
```

Properties

Values

# USING EXTERNAL CSS

---

```
<!DOCTYPE html>
<html>
  <head>
    <title>Using External CSS</title>
    <link href="css/styles.css" rel="stylesheet">
  </head>
  <body>
    <h1>Potatoes</h1>
    <p>There are dozens of...</p>
  </body>
</html>
```

CODE

# USING EXTERNAL CSS

---

```
<!DOCTYPE html>
<html>
  <head>
    <title>Using External CSS</title>
    <link href="css/styles.css" rel="stylesheet">
  </head>
  <body>
    <h1>Potatoes</h1>
    <p>There are dozens of...</p>
  </body>
</html>
```

CODE

## WHY USE EXTERNAL STYLE SHEETS?

---

Same CSS can be used for every page

No need to duplicate style code on each webpage

Changes to CSS automatically apply to the entire website

Faster loading times for subsequent pages because browsers cache style sheets

Easier for teams to create new pages using same styles

# USING CSS: HTML

---

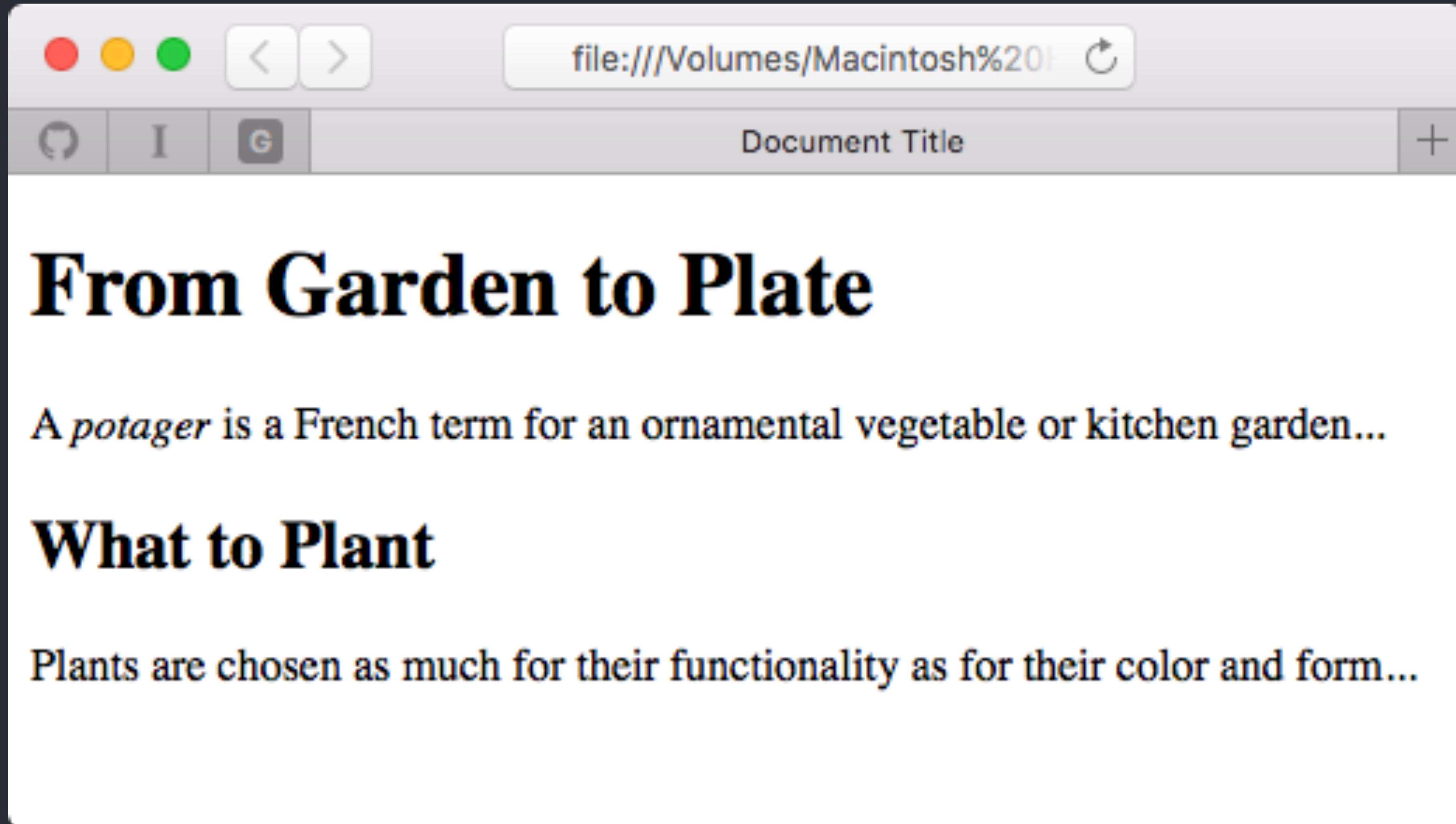
```
<body>
  <h1>From Garden to Plate</h1>
  <p>A <em>potager</em> is a French term for an
ornamental vegetable or kitchen garden...</p>
  <h2>What to Plant</h2>
  <p>Plants are chosen as much for their
functionality as for their color and form...</p>
</body>
```

CODE



# USING CSS: HTML PREVIEW

---



# USING CSS: CSS

---

CODE

```
body {  
    font-family: Arial, Verdana, sans-serif;  
}
```

```
h1, h2 {  
    color: #ee3e80;  
}
```

```
p {  
    color: #665544;  
}
```

# USING CSS: CSS

---

```
/* Change the font */
body {
    font-family: Arial, Verdana, sans-serif;
}

h1, h2 {
    color: #ee3e80;
}

p {
    color: #665544;
}
```

CODE

# USING CSS: CSS

---

CODE

```
body {
  font-family: Arial, Verdana, sans-serif;
}

/* Change the text color of the headings */
h1, h2 {
  color: #ee3e80;
}

p {
  color: #665544;
}
```

# USING CSS: CSS

---

CODE

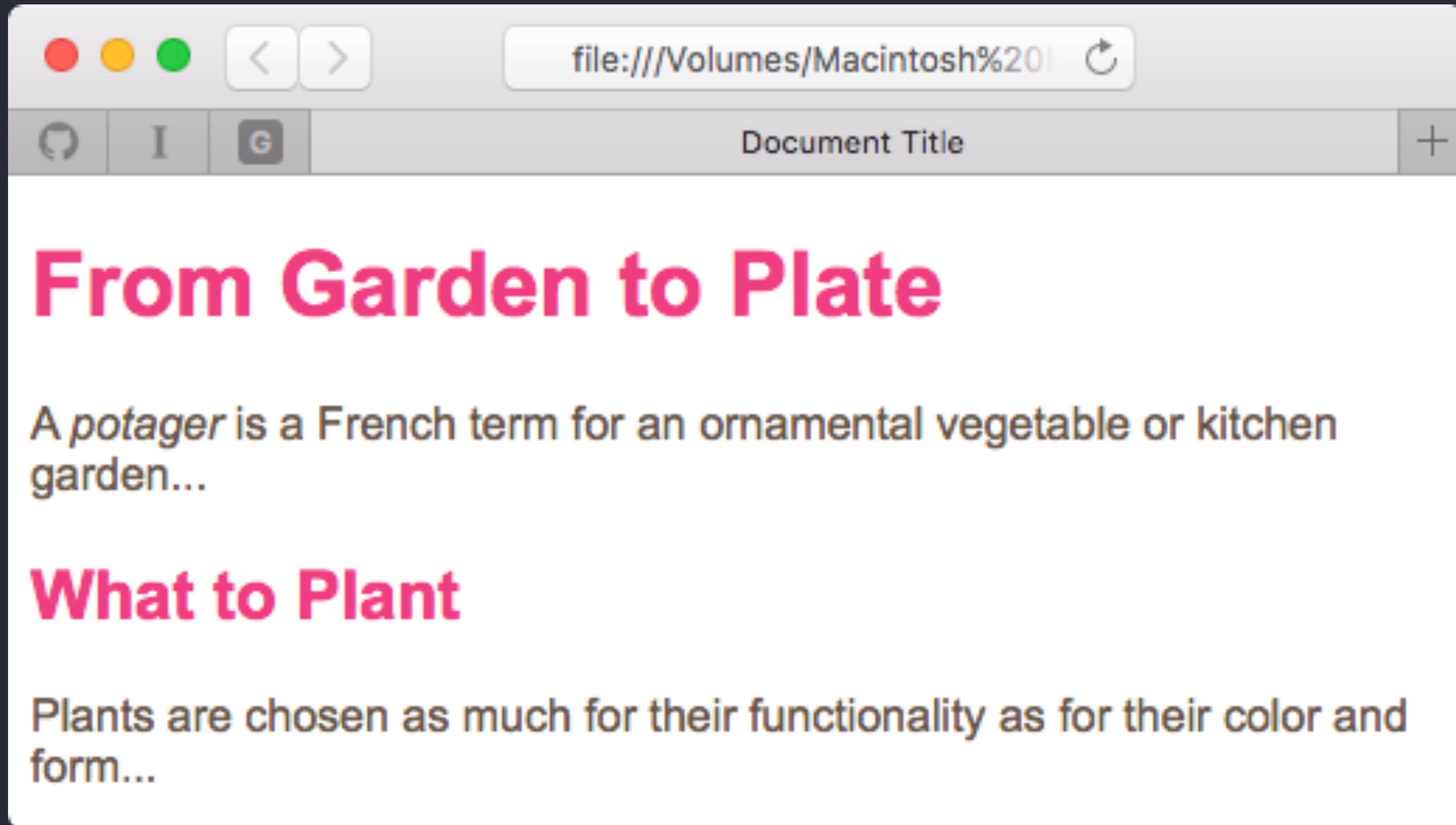
```
body {
    font-family: Arial, Verdana, sans-serif;
}

h1, h2 {
    color: #ee3e80;
}

/* Change the text color of the paragraphs */
p {
    color: #665544;
}
```

# USING CSS: CSS PREVIEW

---



# SELECTORS

# CSS SELECTORS

---

Allow you to **select** various parts of your HTML markup for **styling**



# CSS SELECTORS

---

Universal

```
* {}
```

Type

```
h1, h2, h3 {}
```

Class

```
.note {}  
p.note {}
```

Descendent

```
p a {}
```

ID

```
#introduction {} /* NEVER use these */
```

# CASCADE & INHERITANCE

# CASCADE

---

Selectors **further down** a style sheet **override** the same selectors **higher** in the style sheet

# CASCADE

---

```
h1 {  
  color: green;  
}
```

```
h1 {  
  color: red;  
}
```

CODE

# CASCADE

---

```
h1 {  
  color: green;  
}
```

CODE

```
h1 {  
  color: red; /* All h1 will be red, overriding green set above */  
}
```

# INHERITANCE

---

Some properties **inherit** styles from **parent elements**

# INHERITANCE

---

```
body {  
  font-family: Arial;  
  color: #333;  
  padding: 10px;  
}
```

```
h1 { ... }
```

```
.page { ... }
```

CODE

# INHERITANCE

---

```
body {  
  font-family: Arial; /* Inherited by children */  
  color: #333; /* Inherited by children */  
  padding: 10px;  
}
```

```
h1 { ... }
```

```
.page { ... }
```

CODE



# INHERITANCE

---

```
body {  
  font-family: Arial;  
  color: #333;  
  padding: 10px;  
}
```

```
h1 {  
  color: #acd123; /* Override color set on parent (body) */  
}
```

```
.page { ... }
```

CODE

# INHERITANCE

---

```
body {  
  font-family: Arial;  
  color: #333;  
  padding: 10px; /* Not inherited by children */  
}  
  
h1 {  
  color: #acd123; /* Override color set on parent (body) */  
}  
  
.page {  
  padding: inherit; /* Force inheritance from parent (body) */  
}
```

CODE

**SPECIFICITY**

*“It doesn’t matter how well-considered your source order is; how well you’re utilizing the cascade; what naming conventions you use; **specificity can undo everything.**”*

*- Harry Roberts, CSS Wizardry*

# SPECIFICITY

---

Selectors that are **more specific** will **override** selectors that are **less specific**  
(regardless of placement in stylesheet)

# CALCULATING SPECIFICITY

---

A weight is applied to a CSS selector

Weight is determined by the number of **each selector types** in the selector:

0. Type selectors (e.g. `h1`)
1. Class selectors (e.g. `.example`)
2. ID selectors (e.g. `#example`)

<https://specificity.keegan.st>

# CALCULATING SPECIFICITY

---

```
h1 { ... }  
0 IDs      0 classes    1 element    = 1
```

```
body header h1 { ... }  
0 IDs      0 classes    3 elements   = 3
```

```
.primary { ... }  
0 IDs      1 class       0 elements   = 10
```

```
h1.primary { ... }  
0 IDs      1 class       1 element    = 11
```

```
.hero h1.primary { ... }  
0 IDs      2 classes    1 element    = 21
```

```
#primary-header { ... }  
1 ID       0 classes    0 elements   = 100
```

CODE

# SPECIFICITY PITFALLS

---

Styles quickly become dependent on each other

```
#content table { ... }
```

Overriding styles becomes increasingly difficult

One overly-specific selector can wreak havoc



# CSS TYPOGRAPHY

# TYPEFACES

---

```
html {  
    font-family: Georgia, Times, serif;  
}  
  
h1, h2 {  
    font-family: Arial, Verdana, sans-serif;  
}  
  
.credits {  
    font-family: "Courier New", Courier, monospace;  
}
```

CODE

## Briards

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

### Breed History

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# TYPE SIZES

---

```
html {  
  font-family: Georgia, Times, serif;  
  font-size: 12px;  
}
```

```
h1, h2 {  
  font-size: 2rem; /* 2 × 12px (html font size) = 24px */  
}
```

```
.credits {  
  font-size: 130%;  
}
```

CODE

## Briards

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

### Breed History

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# LEADING

---

```
p {  
  line-height: 1.4; /* No unit, is a multiple of font-size */  
}
```

CODE

## Briards

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

### Breed History

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# BOLD

---

```
.credits {  
  font-weight: bold;  
}
```

CODE



## Briards

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

### Breed History

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned

# ITALIC

---

```
.credits {  
  font-style: italic;  
}
```

CODE

## **Briards**

*by Ivy Duckett*

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

### **Breed History**

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# UPPER AND LOWERCASE

---

```
h1 {  
  text-transform: uppercase;  
}
```

```
h2 {  
  text-transform: lowercase;  
}
```

```
.credits {  
  text-transform: capitalize;  
}
```

CODE

# UPPER AND LOWERCASE

## BRIARDS

By Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

### breed history

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# UNDERLINE AND STRIKETHROUGH

---

```
.credits {  
  text-decoration: underline;  
}  
  
a {  
  text-decoration: none; /* Remove default underline from all links */  
}
```

CODE

# UNDERLINE AND STRIKETHROUGH

## Briards

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

## Breed History

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# LETTER AND WORD SPACING

---

```
h1, h2 {  
  text-transform: uppercase;  
  letter-spacing: 0.2em;  
}
```

```
.credits {  
  font-weight: bold;  
  word-spacing: 1em;  
}
```

CODE



# LETTER AND WORD SPACING

## BRIARDS

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

## BREED HISTORY

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# ALIGNMENT

---

```
h1 {  
  text-align: left;  
}  
  
p {  
  text-align: justify;  
}  
  
.credits {  
  text-align: right;  
}
```

CODE

## Briards

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

### Breed History

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

# CSS COLOR

## CMYK AND RGB

---

**CMYK:** subtractive color model used in print

Cyan, Magenta, Yellow, Black

**RGB:** additive color model used for screens

Red, Green, Blue

Red, green, and blue light are added together to reproduce colors

# SPECIFYING COLORS

---

## RGB VALUES

```
rgb(102, 205, 170)
```



## HEX CODES

```
#66cdaa
```



## COLOR NAMES

```
mediumAquaMarine
```



## HSL VALUES

```
hsl(160, 51%, 30%)
```



# FOREGROUND COLORS

---

```
h1 {  
  color: DarkCyan;  
}
```

```
h2 {  
  color: #ee4e80;  
}
```

```
p {  
  color: rgb(100, 100, 90);  
}
```

CODE

# FOREGROUND COLORS

## Marine Biology

### The Composition of Seawater

Almost anything can be found in seawater. This includes dissolved materials from Earth's crust as well as materials released from organisms. The most important components of seawater that influence life forms are salinity, temperature, dissolved gases (mostly oxygen and carbon dioxide), nutrients, and pH. These elements vary in their composition as well as in their influence on marine life.



# BACKGROUND COLORS

---

```
body {  
  background-color: rgb(200, 200, 200);  
}
```

CODE

```
h1 {  
  color: #ffffff;  
  background-color: DarkCyan;  
}
```

```
h2 {  
  color: #ffffff;  
  background-color: #ee3e80;  
}
```

# BACKGROUND COLORS

## Marine Biology

### The Composition of Seawater

Almost anything can be found in seawater. This includes dissolved materials from Earth's crust as well as materials released from organisms. The most important components of seawater that influence life forms are salinity, temperature, dissolved gases (mostly oxygen and carbon dioxide), nutrients, and pH. These elements vary in their composition as well as in their influence on marine life.

# CSS VERSIONS AND BROWSER QUIRKS

---

There are several different version of CSS

Not all browsers support all properties and features

Especially older browsers like < IE 10

<http://caniuse.com>

Some browsers implement features differently

Some browsers have "bugs" and/or "quirks"

It is important to test your code in multiple browsers

<https://developer.mozilla.org/en-US/docs/Web/CSS/Reference>

**QUESTIONS?**