CSS

Module 5

MODULE OVERVIEW

- An Introduction to CSS
- CSS Selectors
- Applying Styles
- Inheritance and Specificity
- Responsive Web Design with Bootstrap

Exercise

Create external, internal and inline styles

Style a web page using Bootstrap

What is CSS?

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files

Simple CSS Style Rules

```css
body      {
          font: 16px Verdana, sans-serif;
          line-height: 1.8;
          color: black;
          }
  h1      {font: 18px; color: darkmagenta;}
  p       {color: darkgray;}
  span    {color: magenta;}
```

An Introduction to CSS

This paragraph has styling applied via an external CSS file.

An Introduction to CSS

This paragraph has styling applied via an external CSS file.

CSS Selectors

Selector Example	Description
p {color: blue;}	All elements of a particular type: all p tags
h1, h2, h3, h4 {color: blue;}	Multiple selectors can be combined with a comma: all h1 to h4 tags
* {color: blue;}	The universal selector matches anything: all text will be blue
.blueit {color: blue;}	A class called blueit is created <p **class="blueit"**>I am blue</p>
#blueit {color: blue;}	A tag with a given id is given a style <p **id="blueit"**>I am blue</p>

CSS Advanced Selectors

Selector Example	Description
p.blueit {color: blue;}	All tags in a style class of a certain type. All <p> tags with class="blueit"
p#blueit {color: blue;}	A specific tag with a given ID. All <p> tags with id="blueit"
p span {color: blue;}	Any descendant tag: child, grandchild, great grandchild etc. All spans within <p> tags
p > span {color: blue;}	A direct descendant tag Text blue text text
h1 + p {color: blue;}	An immediate sibling (adjacent selector) Heading Text is blue

CSS Attribute Selectors

Selector Example	Description
a[href] {color: blue;}	All <a> tags with a href attribute present
img[src="logo.jpg"] {width: 5px;}	All <img> tags with a src attribute matching the value logo.jpg
table[title~="important"] {width: 100%;}	All tables with a title that includes the word important
[lang|=en]	All elements with a lang attribute value starting with "en"

CSS Comments

```css
/* body style */
body     {
         font: 16px Verdana, sans-serif;
         line-height: 1.8;
         color: black;
         }
/* h1 style */
  h1     {font: 18px; color: darkmagenta;}
  p      {color: darkgray;}
/*
  span   {color: magenta;}
*/
```

An Introduction to CSS

This paragraph has styling applied via an external CSS file.

Applying Style Sheets

External

```
<link rel="stylesheet" type="text/css" href="styles.css" />
```

Imported

```
<style type="text/css">
    @import url("styles.css");
</style>
```

Internal

```
<style type="text/css">
    p {color:blue}
</style>
```

Inline

```
<p style="color:blue">
   ...
</p>
```

External Style Sheets

```html
<head>
    <title>Applying Style Sheets</title>
    <link rel="stylesheet" type="text/css" href="ExternalStyles.css">
</head>
```

```css
/* body style */
body      {
        font: 16px Verdana, sans-serif;
        line-height: 1.8;
        background-color: linen;
        }
/* h1 style */
  h1      {font: 18px; color: darkmagenta;}
/* p style */
  p       {color: darkgray;}
```

External Style Sheets

This paragraph has styling applied via an external CSS file.

Importing Style Sheets

```html
<head>
    <title>Applying Style Sheets</title>
    <link rel="stylesheet" type="text/css" href="mystyles.css">
</head>
```

```css
@import url("stylesD.css");
/* body style */
body     {
          font: 16px Verdana, sans-serif;
          line-height: 1.8;
          background-color: linen;
          }
/* h1 style */
  h1     {font: 18px; color: darkmagenta;}
/* p style */
  p      {color: darkgray;}
```

```css
p        {background-color: white;}
```

Imported Style Sheets

This paragraph has styling applied via an imported CSS file.

Internal Style Sheets

```html
<!DOCTYPE html>
<html>
    <head>
        <title>Applying Style Sheets</title>
<style>
body {
        font: 16px Verdana, sans-serif;
        line-height: 1.8;
        background-color: linen;
}
h1    {   font: 18px; color: darkmagenta;
}
p     {   color: darkgray;
        background-color: white;
}
</style>
    </head>
    <body>
        <h1>Internal Styles</h1>
        <p>This paragraph has styling applied via internal styles.</p>
    </body>
</html>
```


Internal Styles

This paragraph has styling applied via internal styles.

Inline Styles

```html
<!DOCTYPE html>
<html>
    <head>
        <title>Applying Style Sheets</title>
    </head>
<body style="font: 16px Verdana, sans-serif;line-height: 1.8;background-color:linen;">
        <h1 style="font: 18px; color: darkmagenta;">Inline Styles</h1>
        <p style="color: darkgray; background-color: white;">This paragraph has
            styling applied via inline styles.</p>
        <p>This paragraph has no specific inline styles.</p>
</body>
</html>
```
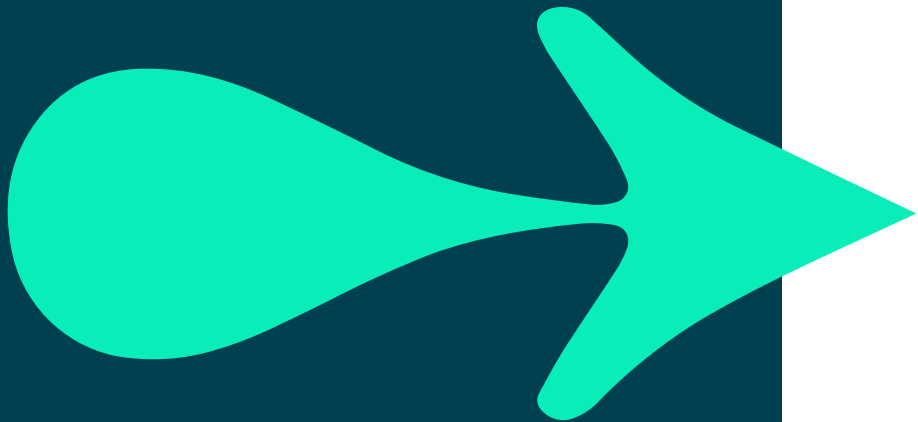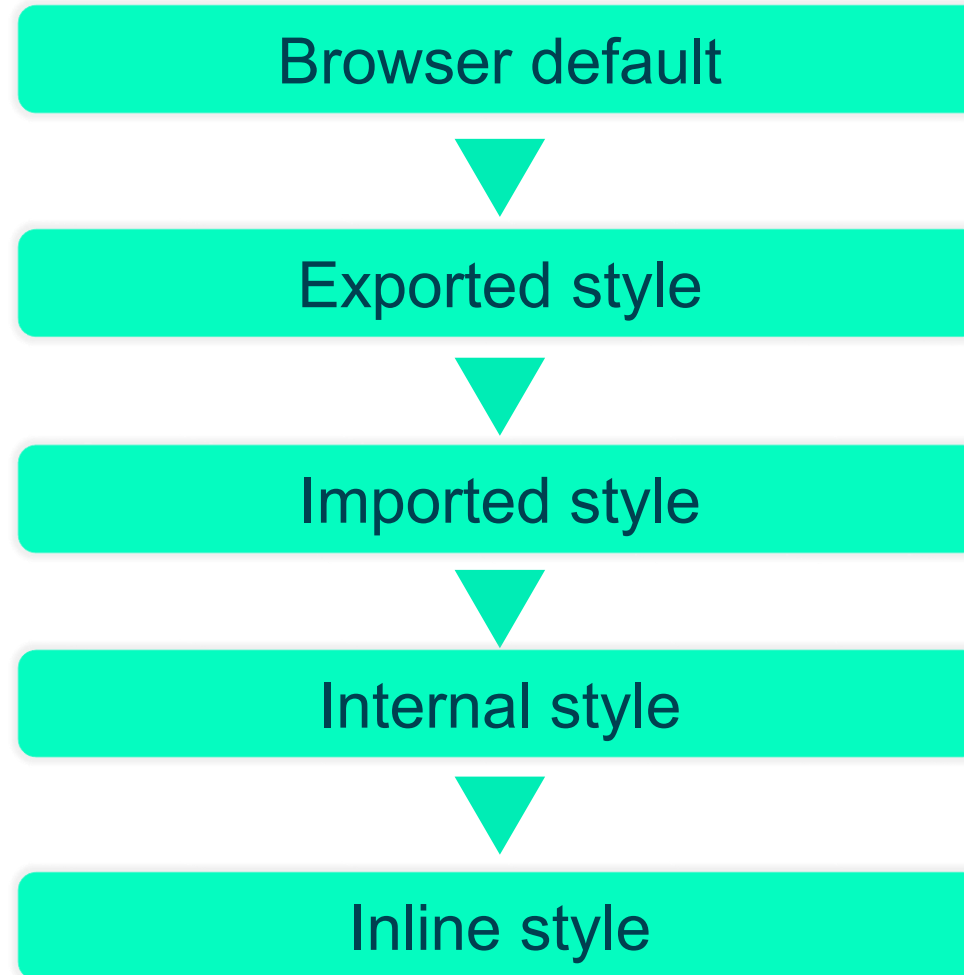
Inline Styles

This paragraph has styling applied via inline styles.

This paragraph has no specific inline styles.

Inheritance: All HTML elements inherit properties from their parent (containing) elements and pass them on to their children.

Specificity: the means by which browsers decide which CSS property values are the most relevant to an element and, therefore, will be applied.

CSS Specificity

Browser default

▼

Exported style

▼

Imported style

▼

Internal style

▼

Inline style

CSS Specificity Rule Order

```
<style type="text/css">
  p        {color: red;}
  .blue    {color: blue;}
  #green   {color: green;}
</style>
    </head>
    <body>
        <p id="green" class="blue" style="color:orange;">Oranges are orange</p>
        <p id="green" class="blue">Oranges are green</p>
        <p class="blue">Oranges are blue</p>
        <p>Oranges are red</p>
    </body>
</html>
```
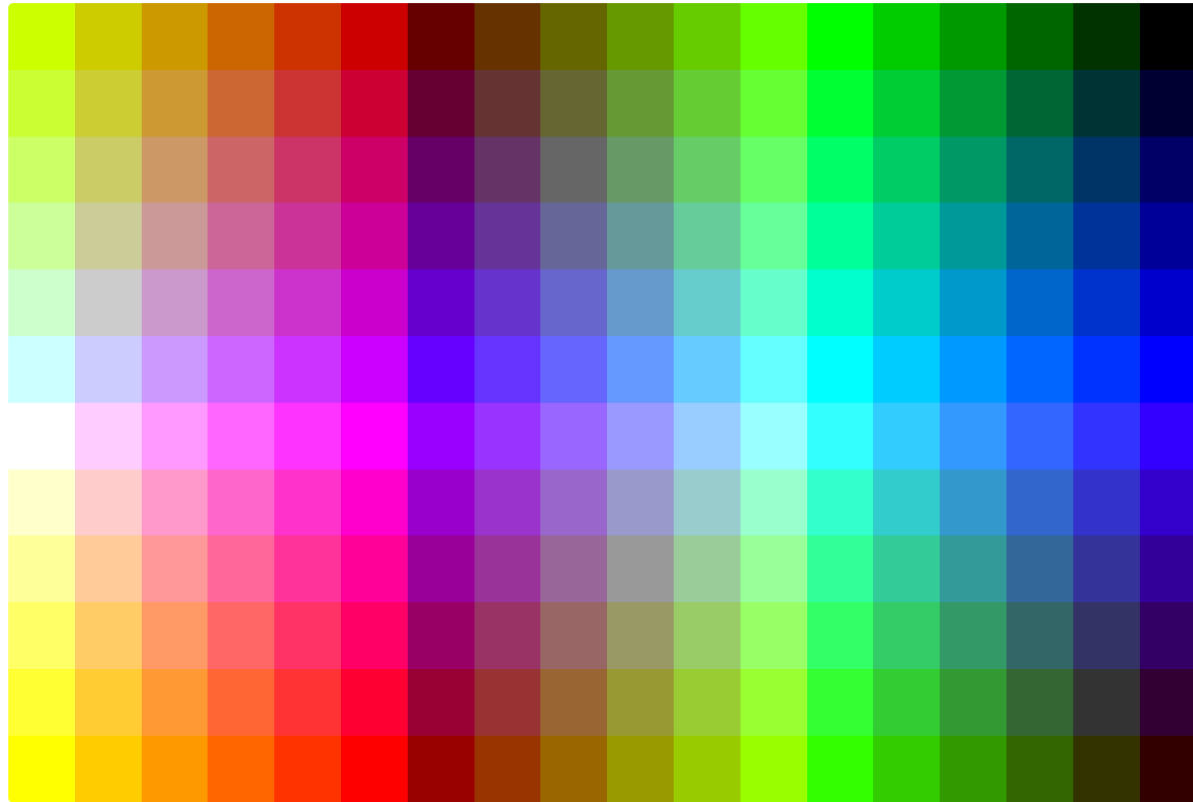
Oranges are orange

Oranges are green

Oranges are blue

Oranges are red

CSS Colours

Activity:
Exercise 5A

Responsive Web Design

Bootstrap

https://getbootstrap.com/

Bootstrap CDN

```html
StyledPage.html > ⬡ html
 1   <!doctype html>
 2   <html lang="en">
 3
 4   <head>
 5       <!-- Required meta tags -->
 6       <meta charset="utf-8">
 7       <meta name="viewport" content="width=device-width, initial-scale=1">
 8
 9       <!-- Bootstrap CSS -->
10       <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta1/dist/css/bootstrap.min.css" rel="stylesheet"
11           integrity="sha384-giJF6kkoqNQ00vy+HMDP7azOuL0xtbfIcaT9wjKHr8RbDVddVHyTfAAsrekwKmP1" crossorigin="anonymous">
12
13       <title>Hello, world!</title>
14   </head>
15
16   <body>
17       <h1>Hello, world!</h1>
18
19       <!-- Optional JavaScript; choose one of the two! -->
20
21       <!-- Option 1: Bootstrap Bundle with Popper -->
22       <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta1/dist/js/bootstrap.bundle.min.js"
23           integrity="sha384-ygbV9kiqUc6oa4msXn9868pTtWMgiQaeYH7/t7LECLbyPA2x65Kgf80OJFdroafW"
24           crossorigin="anonymous"></script>
25
26       <!-- Option 2: Separate Popper and Bootstrap JS -->
27       <!--
28       <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.5.4/dist/umd/popper.min.js" integrity="sha384-q2kxQ16AaE6UbzuKqyBE9/u/Kzi
29       <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta1/dist/js/bootstrap.min.js" integrity="sha384-pQQkAEnwaBkjpqZ8RU1fF1AK
30       -->
31   </body>
32
33   </html>
```
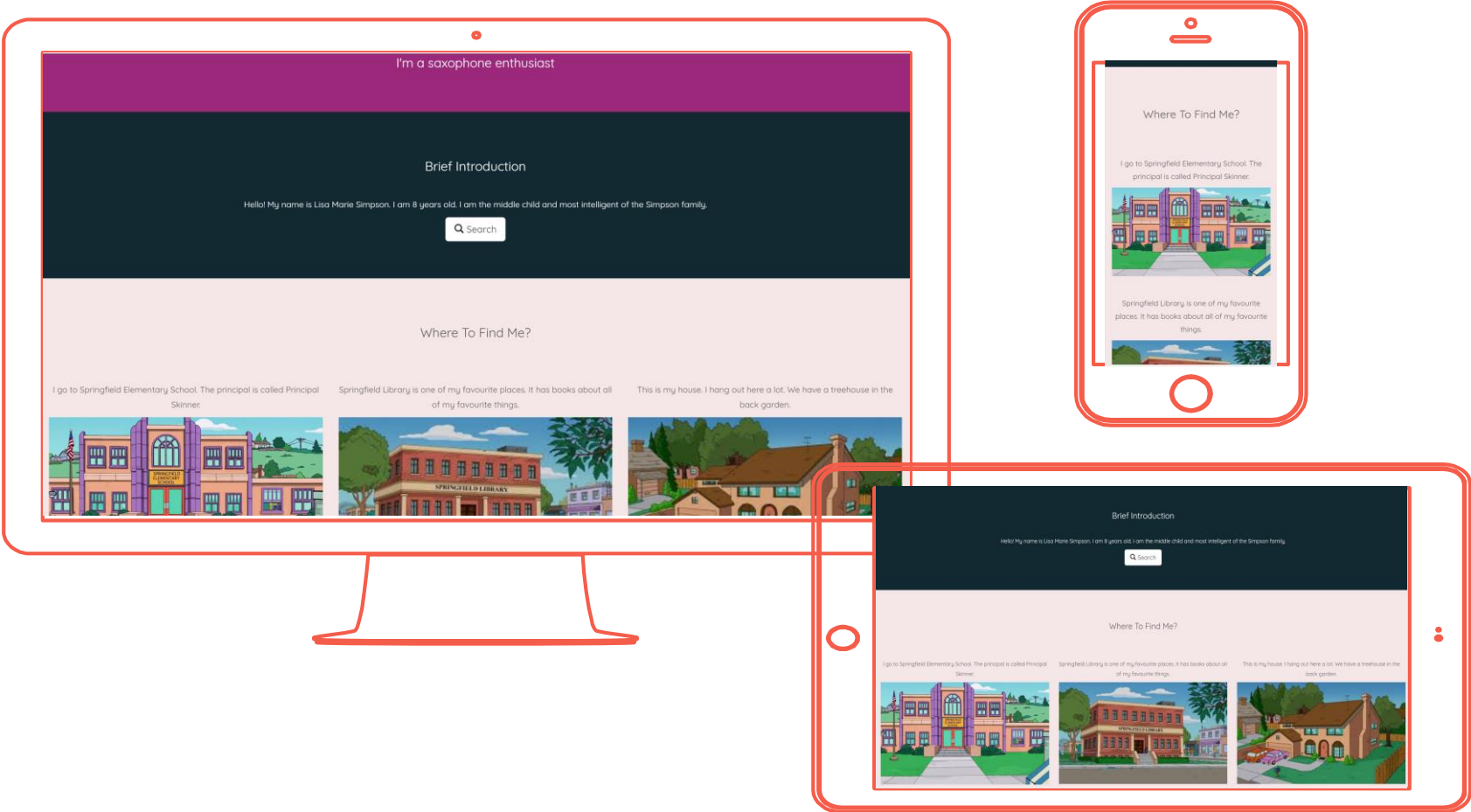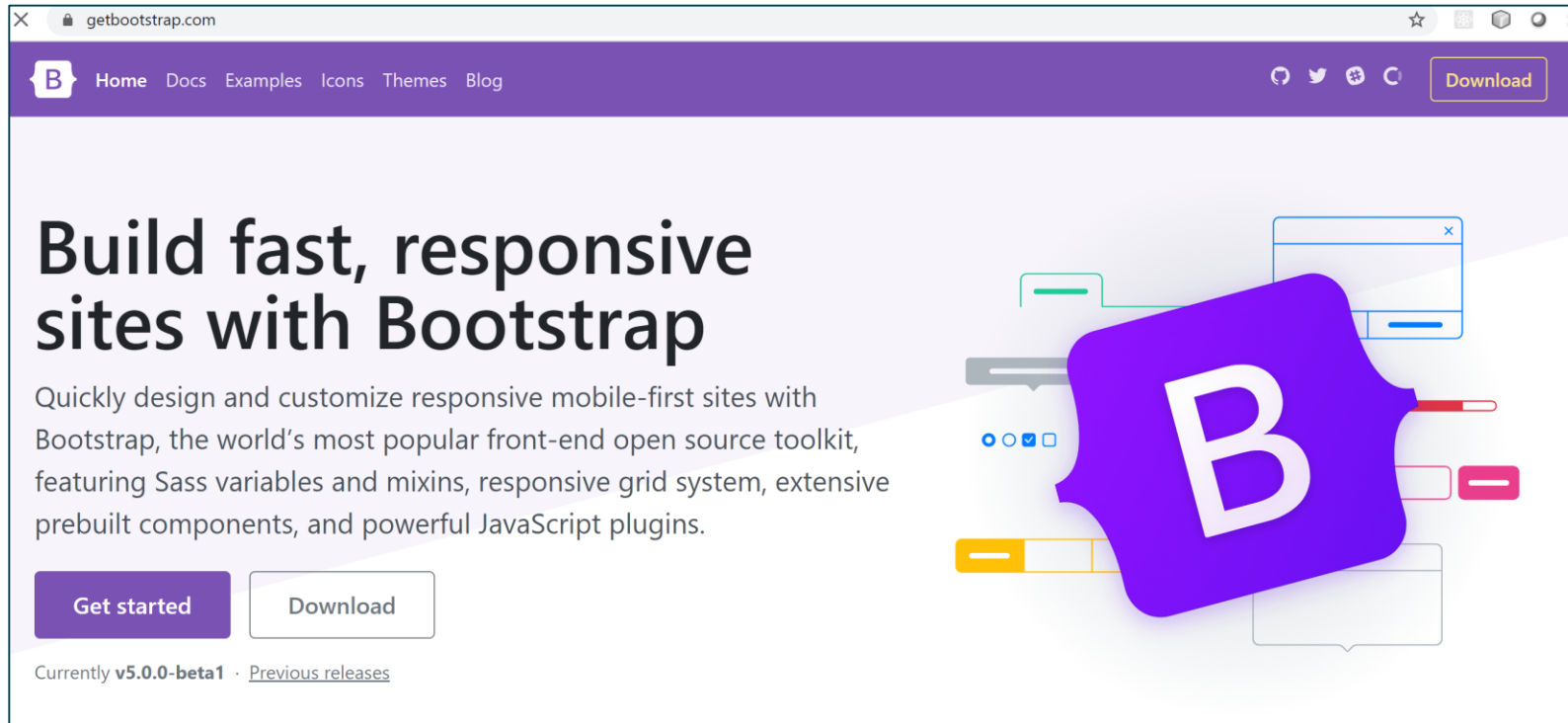
Bootstrap Grids

col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1

col-sm-2	col-sm-10

col-sm-3	col-sm-3	col-sm-3	col-sm-3

col-sm-4	col-sm-4	col-sm-4

col-sm-4	col-sm-8

col-sm-6	col-sm-6

col-sm-12

```html
<div class="row">
    <div class="col-sm-2" style="background-color: #c83d8f;">
        col-sm-2
    </div>
    <div class="col-sm-10" style="background-color: #e55bad;">
        col-sm-10
    </div>
</div>
```

Place rows inside a **container** or **container-fluid**

Fonts

Google Fonts

Roboto
Christian Robertson (12 styles)

All their equipment and instruments are alive.

Archivo
Omnibus-Type (8 styles)

A red flair silhouetted the jagged edge of a wing.

Saira Semi Condensed
Omnibus Type (9 styles)

I watched the storm, so beautiful yet terrific.

Open Sans
Steve Matteson (10 styles)

Almost before we knew it, we had left the ground.

Lato
Łukasz Dziedzic (10 styles)

A shining crescent far beneath the flying vessel.

Slabo 27px
John Hudson (1 style)

It was going to be a lonely trip back.

Tutorials

tutorialspoint
SIMPLYEASYLEARNING

w3schools.com

MDB

Any questions?

Activity:
Exercise 5B

RESOURCES

30 CSS Selectors:

https://code.tutsplus.com/tutorials/the-30-css-selectors-you-must-memorize--net-16048

CSS Selector Tutorial:

https://developer.mozilla.org/en-US/docs/Learn/CSS/Introduction_to_CSS/Simple_selectors

CSS Colours

https://www.w3schools.com/cssref/css_colors.asp

Bootstrap Starter Template

https://getbootstrap.com/docs/5.0/getting-started/introduction/