CSS Layout - Flexbox – Lab

Topics Covered

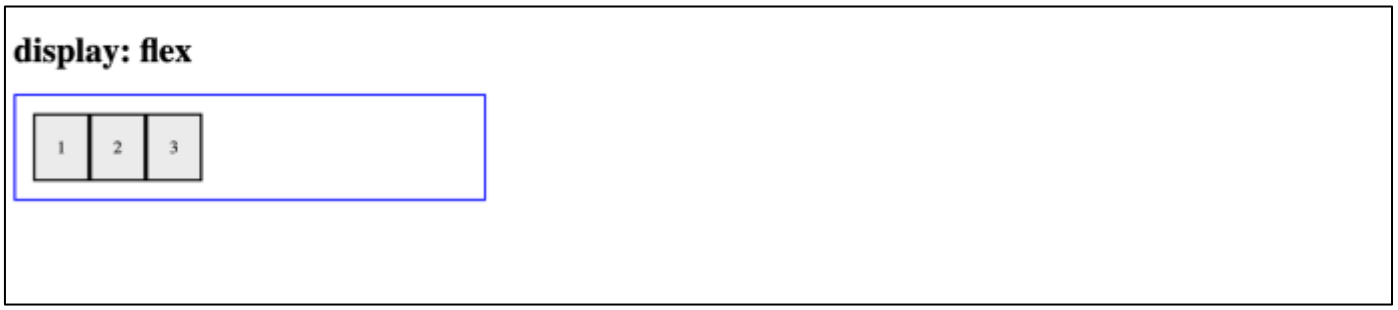
Flexbox is a one-dimensional layout method for arranging items in rows or columns. Items *flex* (expand) to fill additional space or shrink to fit into smaller spaces. This article explains all the fundamentals.

Resources

- **Flexbox MDN**
  - https://developer.mozilla.org/en-US/docs/Learn/CSS/CSS_layout/Flexbox
- **A Complete Guide to Flexbox**
  - https://css-tricks.com/snippets/css/a-guide-to-flexbox/
- **An Interactive Guide to Flexbox**
  - https://www.joshwcomeau.com/css/interactive-guide-to-flexbox/
- **Flexbox cheat sheet**
  - https://codepen.io/kdankov/pen/QWoVyZJ

Tasks

1. Property – display: flex;



For full screenshot check the screenshot.png file in the folder for the task

Objective:

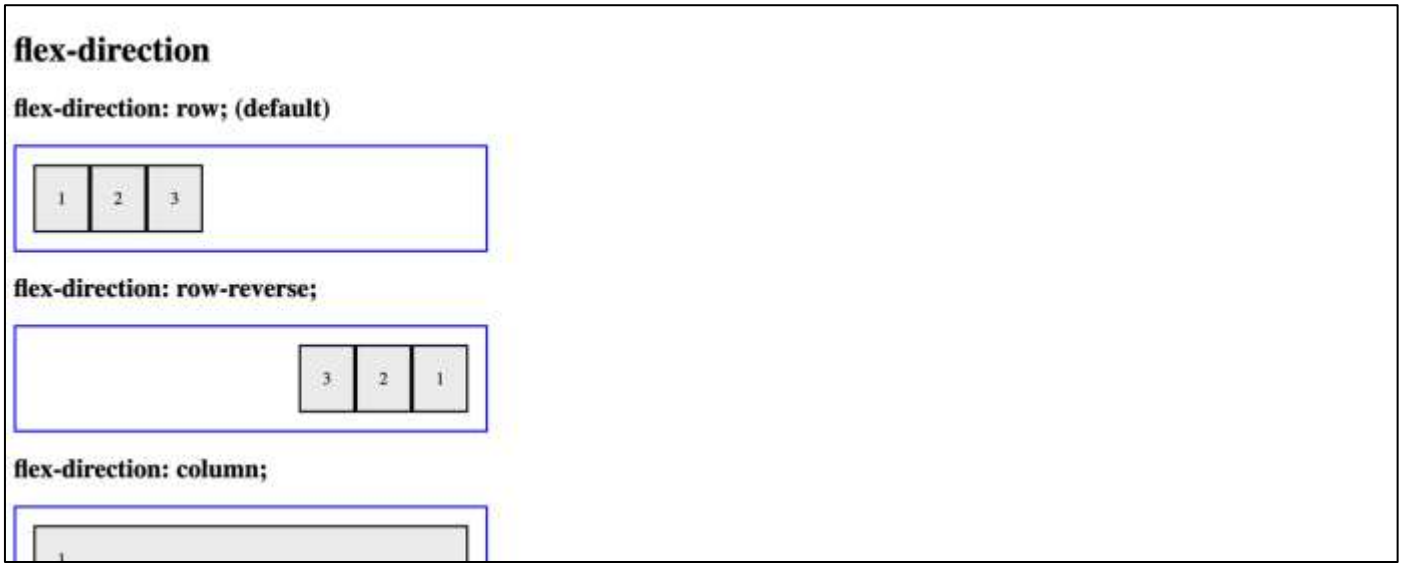
Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
   - Create an **HTML** document named **display-flex.html**
   - Create a **CSS** file named **display-flex.css**
2. **Element creation**
   - Add title of the page in an **<h1>** element
   - Create a ** ** element with a class – "**flex-container**"
   - Create 3 elements inside the .flex-container element with a class of "**flex-item**"
   - Add text to the .flex-item elements as shown on the screenshot

3. **Styling**
    - Add the following styles the .flex-container element:
        1. Width – 400px
        2. Padding – 1em
        3. Border – 2px solid blue
        4. Display – flex
    - Add the following styles to the .flex-item elements inside the .flex-container element:
        1. Background - #eee
        2. Padding – 20px
        3. Border – 2px solid #000

2. Property – flex-direction



For full screenshot check the screenshot.png file in the folder for the task

Objective:

Create a webpage that looks like the screenshot above.

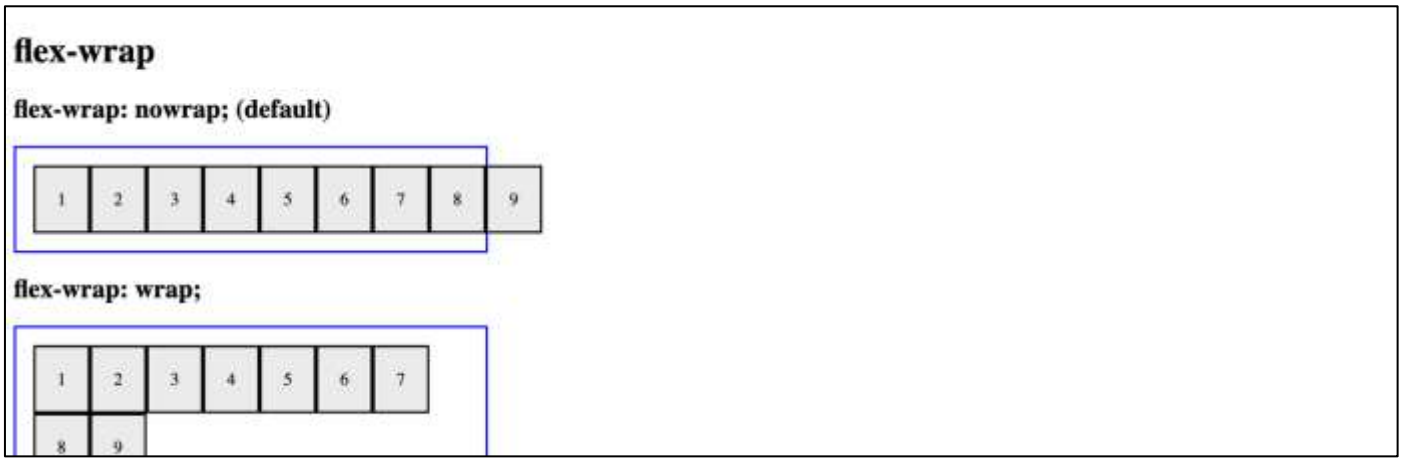
Requirements:

1. **File Setup**:
    - Create an **HTML** document named **flex-direction.html**
    - Create a **CSS** file named **flex-direction.css**
2. **Element creation**
    - Add title of the page in an **<h1>** element
    - Create 4 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
        1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
        2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**
    - Copy the styles from Task 1
    - Create a new class "**flex-direction-row**" with the following styles
        1. Flex-direction – row
    - Create a new class "**flex-direction-row-reverse**" with the following styles
        1. Flex-direction – row-reverse
    - Create a new class "**flex-direction-column**" with the following styles

1. Flex-direction – column

- Create a new class **"flex-direction-column-reverse"** with the following styles
  1. Flex-direction – column-reverse
- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

3. Property – flex-wrap



For full screenshot check the screenshot.png file in the folder for the task

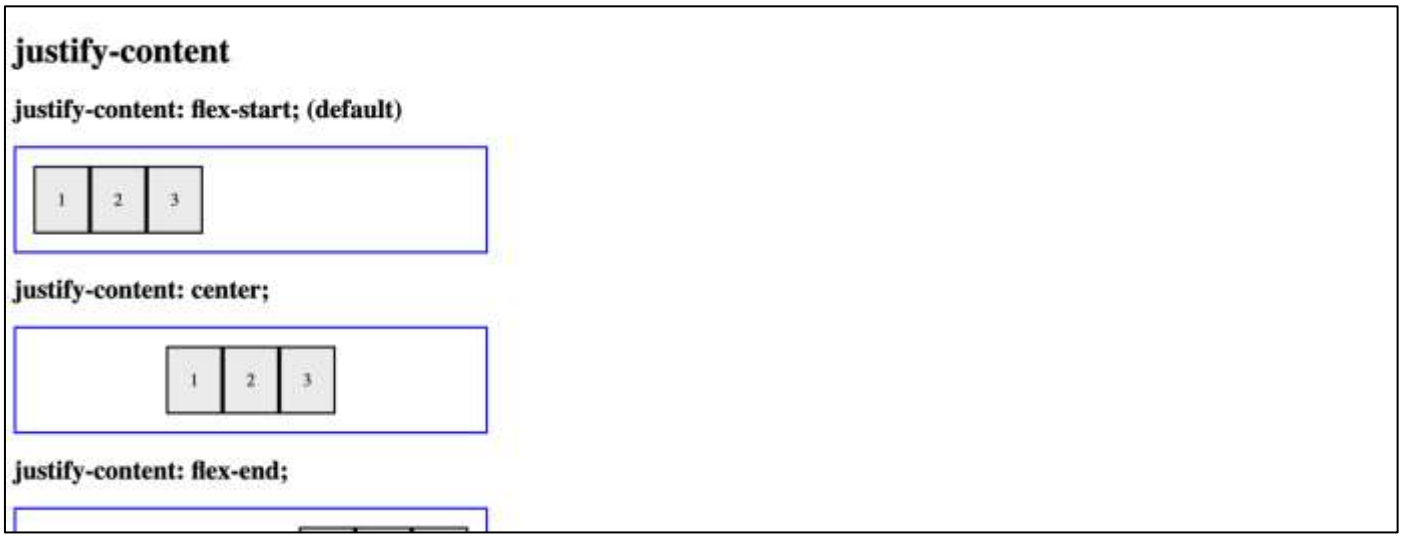
Objective:

Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
   - Create an **HTML** document named **flex-wrap.html**
   - Create a **CSS** file named **flex-wrap.css**
2. **Element creation**
   - Add title of the page in an **<h1>** element
   - Create 3 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
     1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
     2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**
   - Copy the styles from Task 1
   - Create a new class **"flex-wrap-nowrap"** with the following styles
     1. Flex-wrap – nowrap
   - Create a new class **"flex-wrap-wrap"** with the following styles
     1. Flex-wrap – wrap
   - Create a new class **"flex-wrap-wrap-reverse"** with the following styles
     1. Flex-wrap – wrap-reverse
   - Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

4. Property – justify-content



For full screenshot check the screenshot.png file in the folder for the task

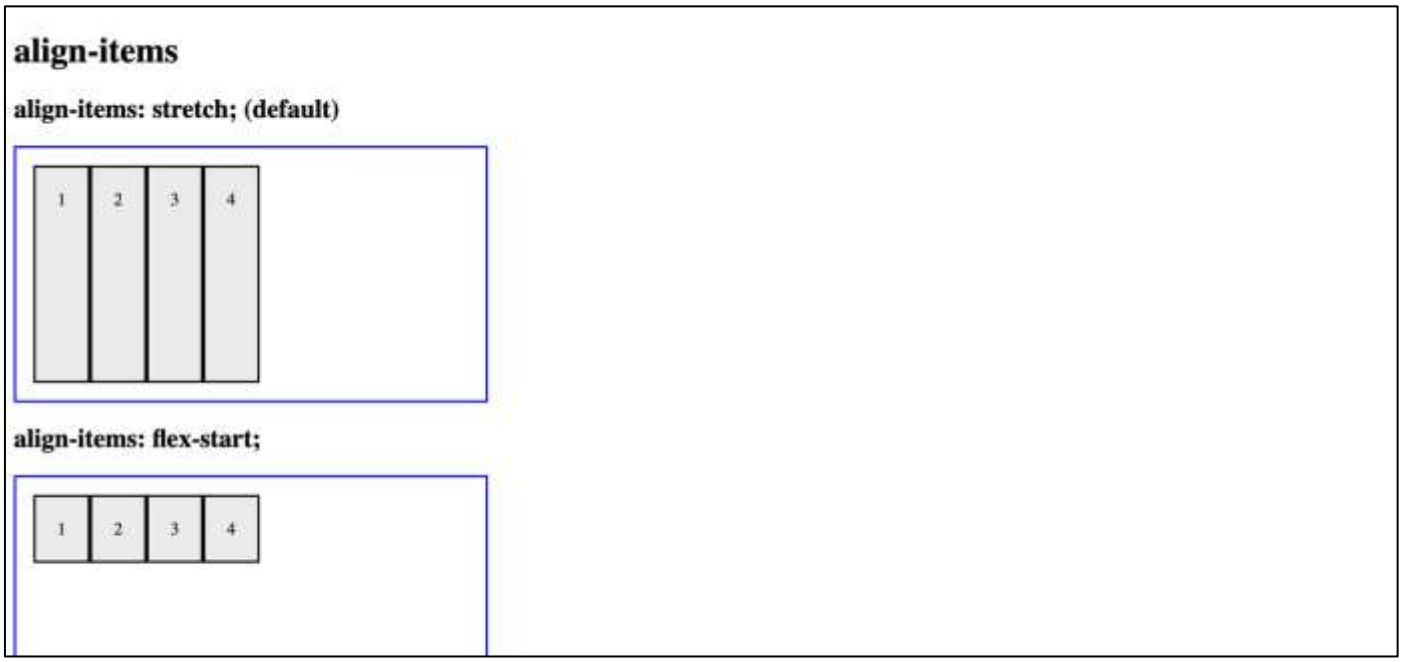
Objective:

Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
   - Create an **HTML** document named **justify-content.html**
   - Create a **CSS** file named **justify-content.css**
2. **Element creation**
   - Add title of the page in an **<h1>** element
   - Create 6 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
     1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
     2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**
   - Copy the styles from Task 1
   - Create a new class **"justify-content-flex-start"** with the following styles
     1. justify-content – flex-start
   - Create a new class **"justify-content-center"** with the following styles
     1. justify-content – center
   - Create a new class **"justify-content-flex-end"** with the following styles
     1. justify-content – flex-end
   - Create a new class **"justify-content-space-between"** with the following styles
     1. justify-content – space-between
   - Create a new class **"justify-content-space-around"** with the following styles
     1. justify-content – space-around
   - Create a new class **"justify-content-space-evenly"** with the following styles
     1. justify-content – space-evenly
   - Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

5. Property – align-items



For full screenshot check the screenshot.png file in the folder for the task

Objective:

Create a webpage that looks like the screenshot above.

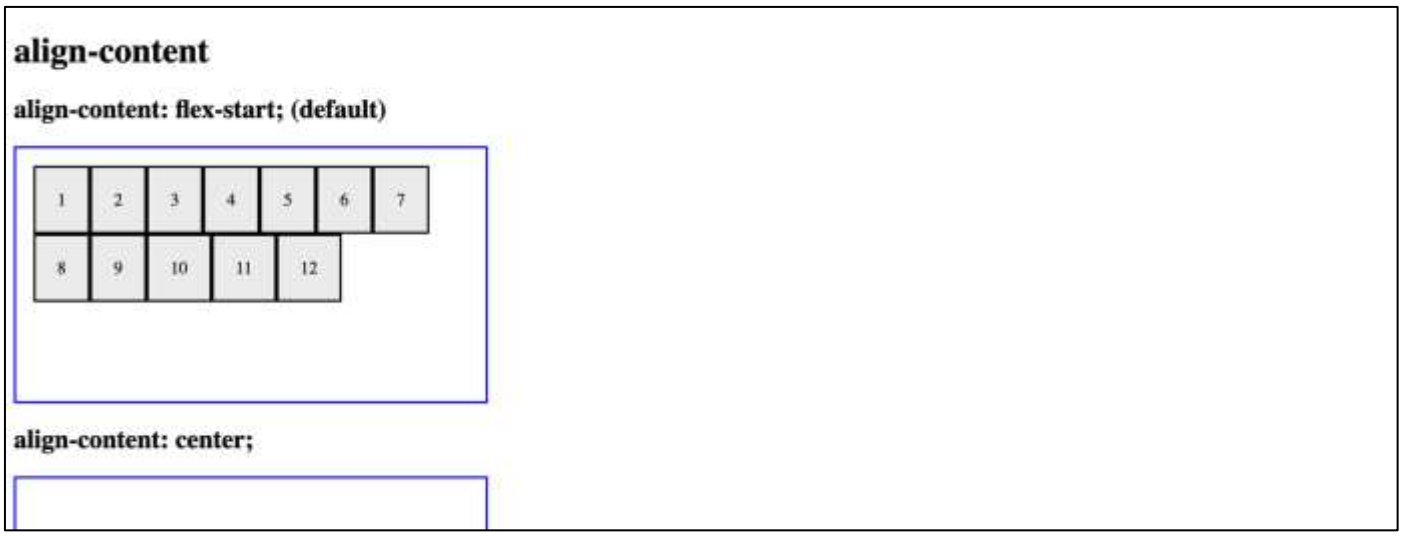
Requirements:

1. **File Setup**:
    - Create an **HTML** document named **align-items.html**
    - Create a **CSS** file named **align-items.css**
2. **Element creation**
    - Add title of the page in an **<h1>** element
    - Create 5 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
        1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
        2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**
    - Copy the styles from Task 1
    - Add the following styles to the .flex-container class:
        1. height - 200px
    - Create a new class **"align-items-stretch"** with the following styles
        1. align-items – stretch
    - Create a new class "**align-items-flex-start"** with the following styles
        1. align-items – flex-start
    - Create a new class **"align-items-center"** with the following styles
        1. align-items – center
    - Create a new class **"align-items-flex-end"** with the following styles
        1. align-items – flex-end
    - Create a new class **"align-items-baseline"** with the following styles
        1. align-items – baseline

- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

6. Property: Align Content

Use the skeleton is in resources to achieve the following view:



For full screenshot check the screenshot.png file in the folder for the task

Objective:

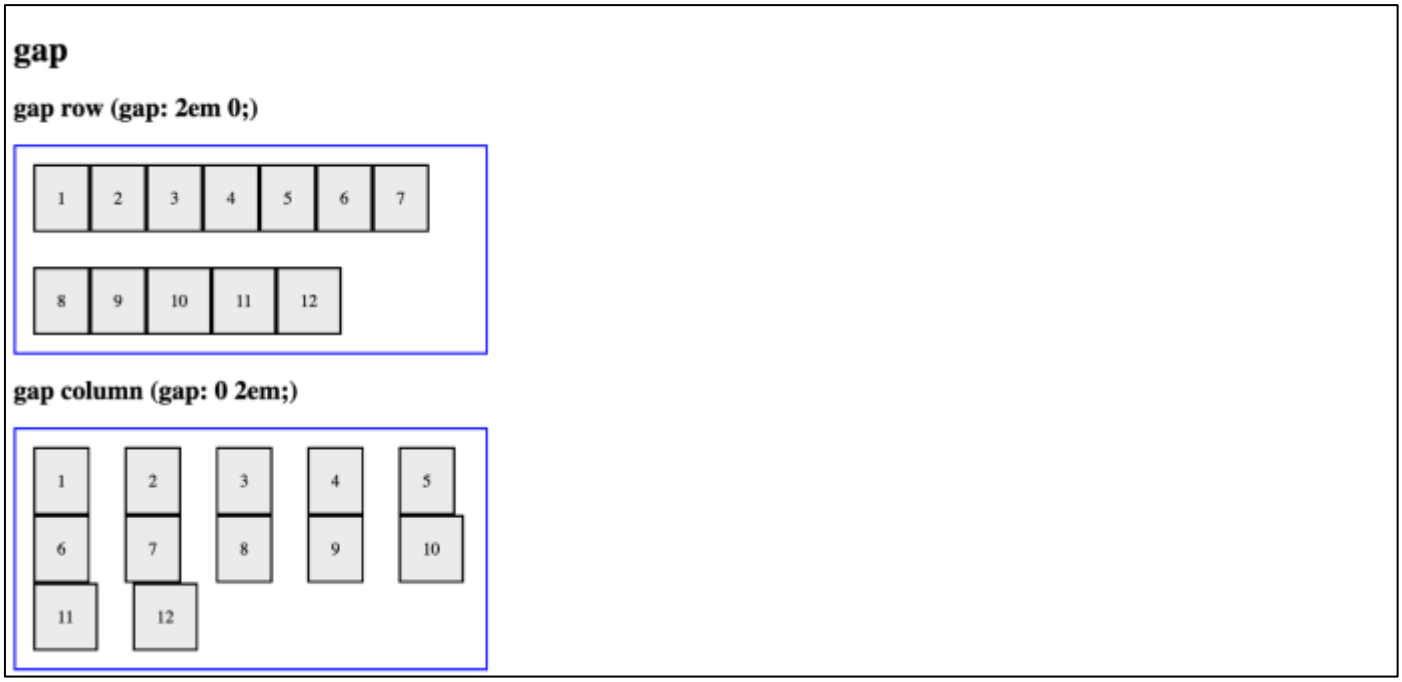
Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
   - Create an **HTML** document named **align-content.html**
   - Create a **CSS** file named **align-content.css**
2. **Element creation**
   - Add title of the page in an **<h1>** element
   - Create 5 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
     1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
     2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**
   - Copy the styles from Task 1
   - Add the following styles to the .flex-container class:
     1. height - 200px
     2. align-items - flex-start
     3. flex-wrap - wrap
   - Create a new class "**align-content-flex-start**" with the following styles
     1. align-content – flex-start
   - Create a new class "**align-content-center**" with the following styles
     1. align-content – center
   - Create a new class "**align-content-flex-end**" with the following styles
     1. align-content – flex-end
   - Create a new class "**align-content-space-between**" with the following styles
     1. align-content – space-between

- Create a new class **"align-content-space-between"** with the following styles
    1. align-content – space-around
- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

7. Property: Gap



For full screenshot check the screenshot.png file in the folder for the task

Objective:

Create a webpage that looks like the screenshot above.

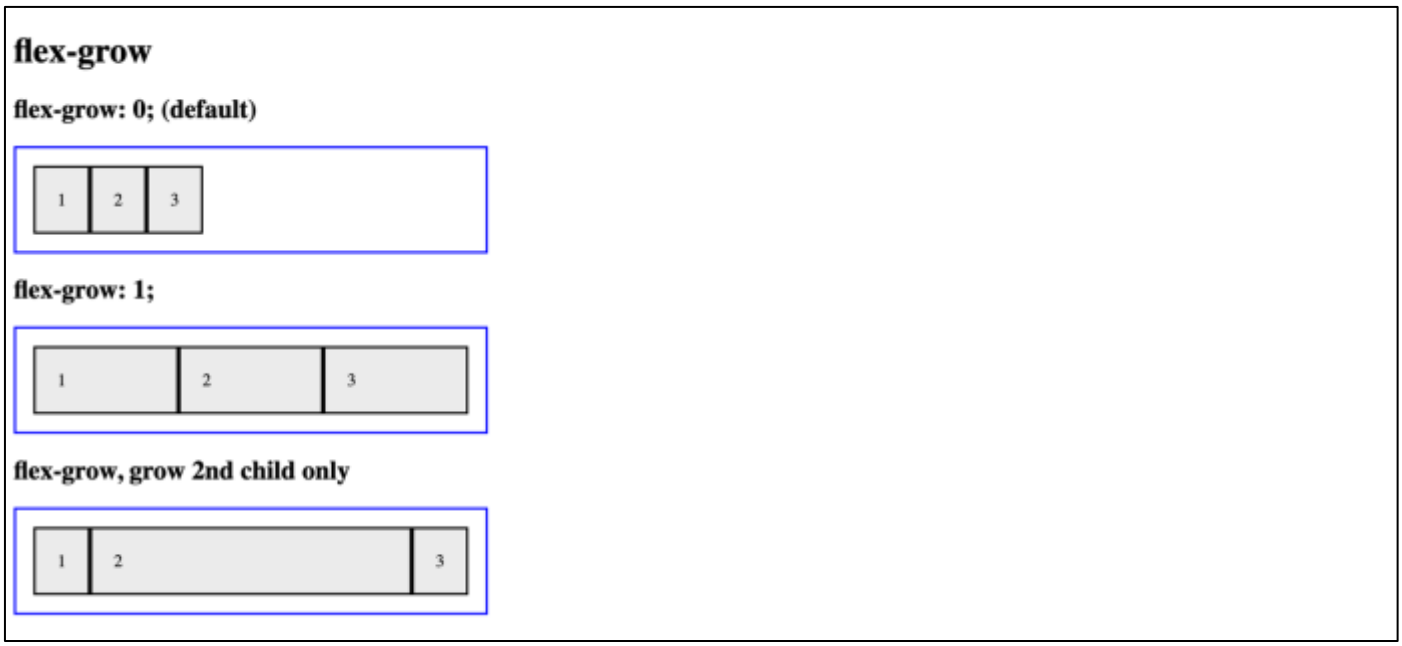
Requirements:

1. **File Setup**:
    - Create an **HTML** document named **gap.html**
    - Create a **CSS** file named **gap.css**
2. **Element creation**
    - Add title of the page in an **<h1>** element
    - Create 3 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
        1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
        2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**
    - Copy the styles from Task 1
    - Add the following styles to the .flex-container class:
        1. align-items – flex-start
        2. flex-wrap - wrap
    - Create a new class **"gap-row"** with the following styles
        1. gap - 2em 0;
    - Create a new class **"gap-column"** with the following styles
        1. gap - 0 2em;
    - Create a new class **"gap"** with the following styles

1. gap - 2em;

- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

8. Property: Flex Grow



For full screenshot check the screenshot.png file in the folder for the task

Objective:

Create a webpage that looks like the screenshot above.

Requirements:

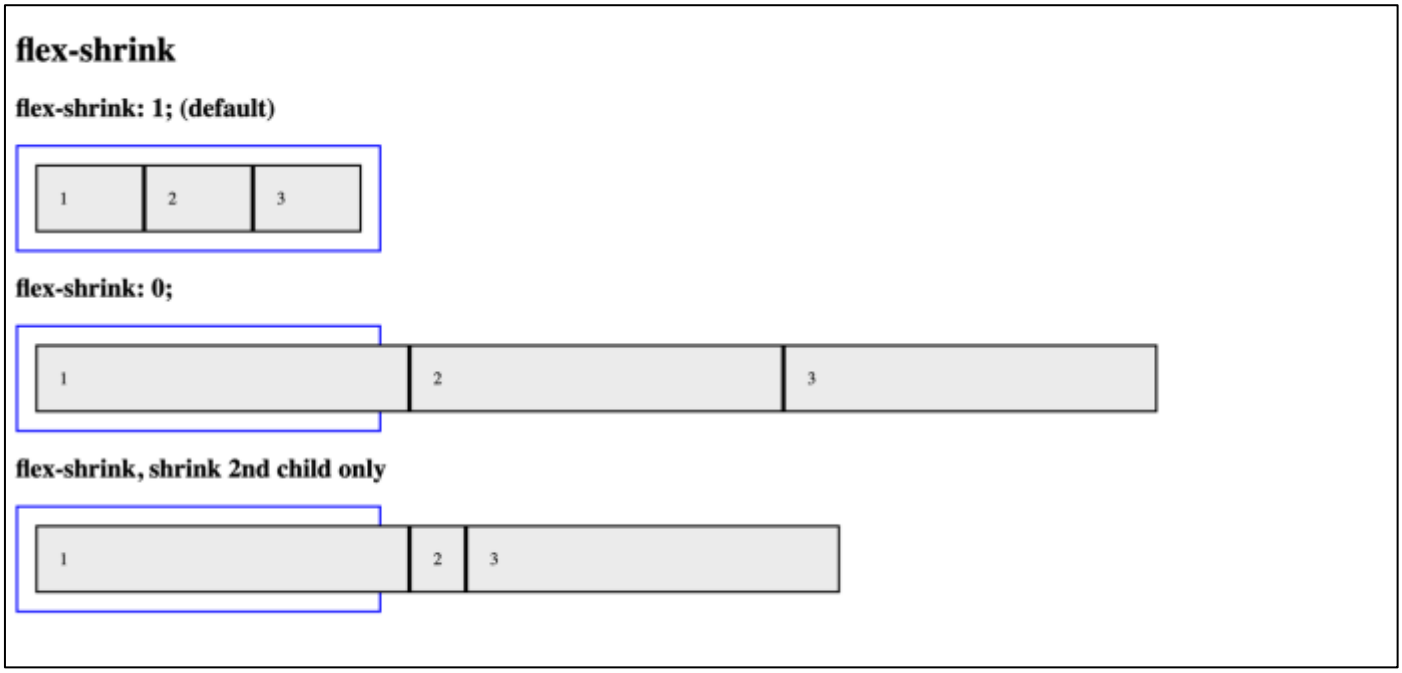
1. **File Setup**:
   - Create an **HTML** document named **flex-grow.html**
   - Create a **CSS** file named **flex-grow.css**

2. **Element creation**
   - Add title of the page in an **<h1>** element
   - Create 4 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
     1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
     2. Add text to the .flex-item elements as shown on the screenshot

3. **Styling**
   - Copy the styles from Task 1
   - Add the following styles to the .flex-container class:
     1. align-items – flex-start
     2. flex-wrap - wrap
   - Create a new class **"flex-grow-one"** and use it to style all .flex-item elements inside it with the following styles
     1. flex-grow - 1;
   - Create a new class **"flex-grow-2nd-only"** and use it to style the 2nd .flex-item element inside it with the following styles
     1. flex-grow - 1;

- Create a new class **"flex-grow-proportional"** and use it to style each .flex-item element inside it with the following styles
    1. Element 1
        1. flex-grow - 1;
    2. Element 2
        1. flex-grow - 2;
    3. Element 3
        1. flex-grow - 3;
- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

9. Property: Flex Shrink



For full screenshot check the screenshot.png file in the folder for the task

Objective:

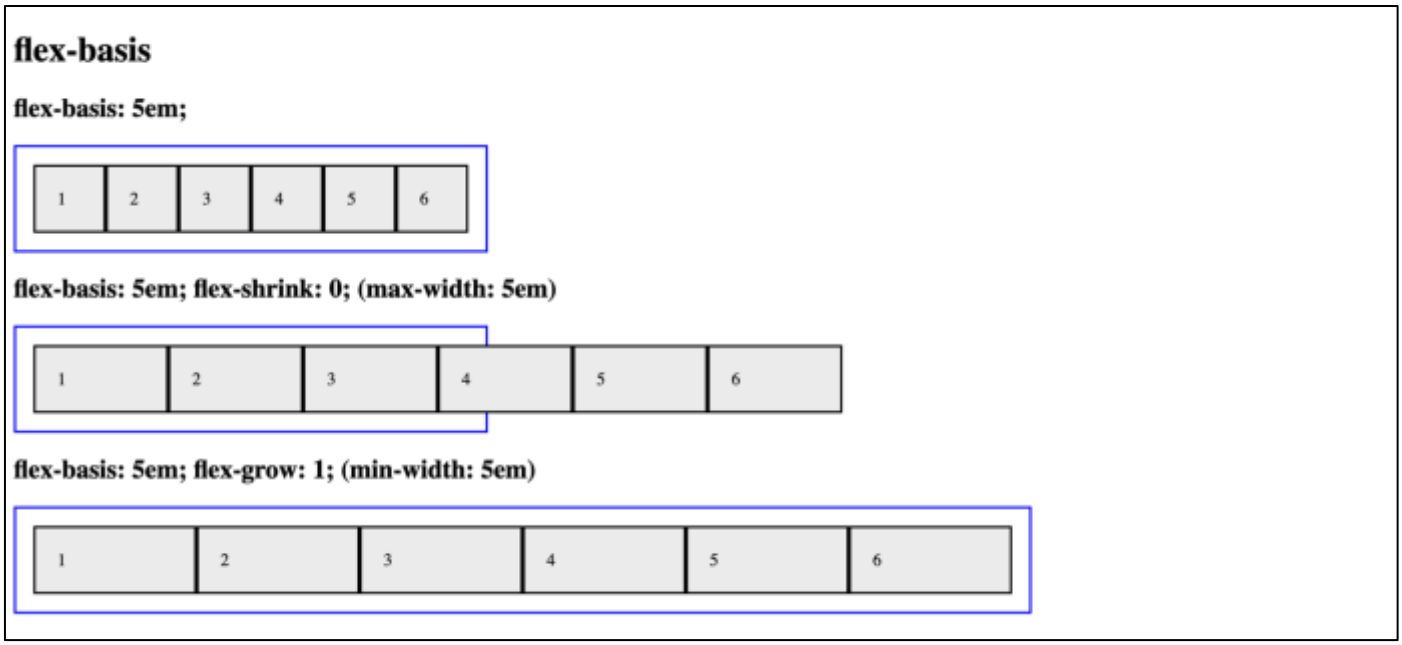
Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
    - Create an **HTML** document named **flex-shrink.html**
    - Create a **CSS** file named **flex-shrink.css**
2. **Element creation**
    - Add title of the page in an **<h1>** element
    - Create 3 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
        1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
        2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**
    - Copy the styles from Task 1
    - Add the following styles to the .flex-item class:
        1. flex-basis – 300px

- Add the following styles to the .flex-container class:
    1. align-items – flex-start
    2. width – 300px
- Create a new class **"flex-shrink-zero"** and use it to style all .flex-item elements inside it with the following styles:
    1. flex-shrink - 0;
- Create a new class **"flex-shrink-2nd-only"** and use it to style all .flex-item element inside it with the following styles:
    1. flex-shrink - 0;
- Use the class **"flex-shrink-2nd-only"** to style the 2nd .flex-item element inside it with the following styles:
    1. flex-shrink - 1;
- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

10. Property: Flex Basis



For full screenshot check the screenshot.png file in the folder for the task

Objective:

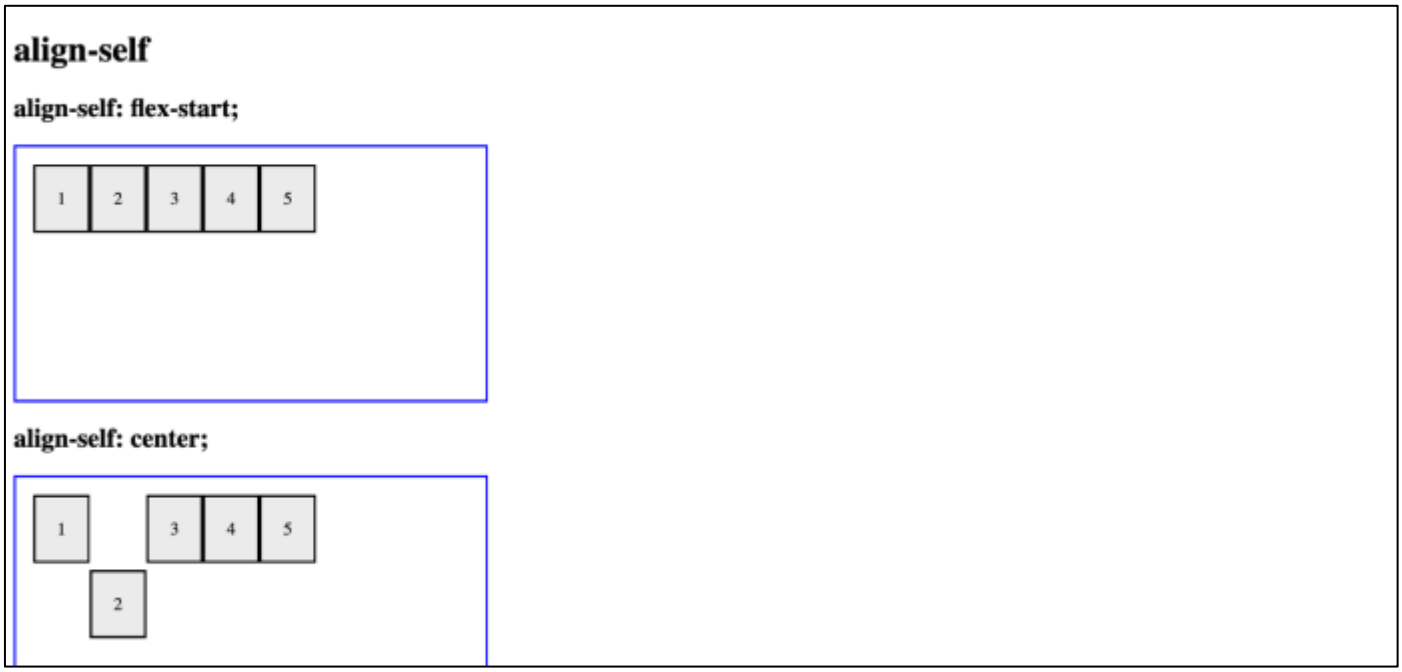
Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
    - Create an **HTML** document named **flex-basis.html**
    - Create a **CSS** file named **flex-basis.css**
2. **Element creation**
    - Add title of the page in an **<h1>** element
    - Create 3 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
        1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
        2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**

- Copy the styles from Task 1
- Create a new class **"flex-basis-5em"** and use it to style all .flex-item elements inside it with the following styles:
    1. flex-basis - 5em;
- Create a new class **"flex-shrink-zero"** and use it to style all .flex-item element inside it with the following styles:
    1. flex-shrink - 0;
- Create a new class **"flex-grow-one"** with the following styles:
    1. Width - 900px;
- Use the class **"flex-grow-one"** it to style all .flex-item element inside it with the following styles:
    1. flex-grow - 1;
- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

11. Property: Align Self



For full screenshot check the screenshot.png file in the folder for the task

Objective:

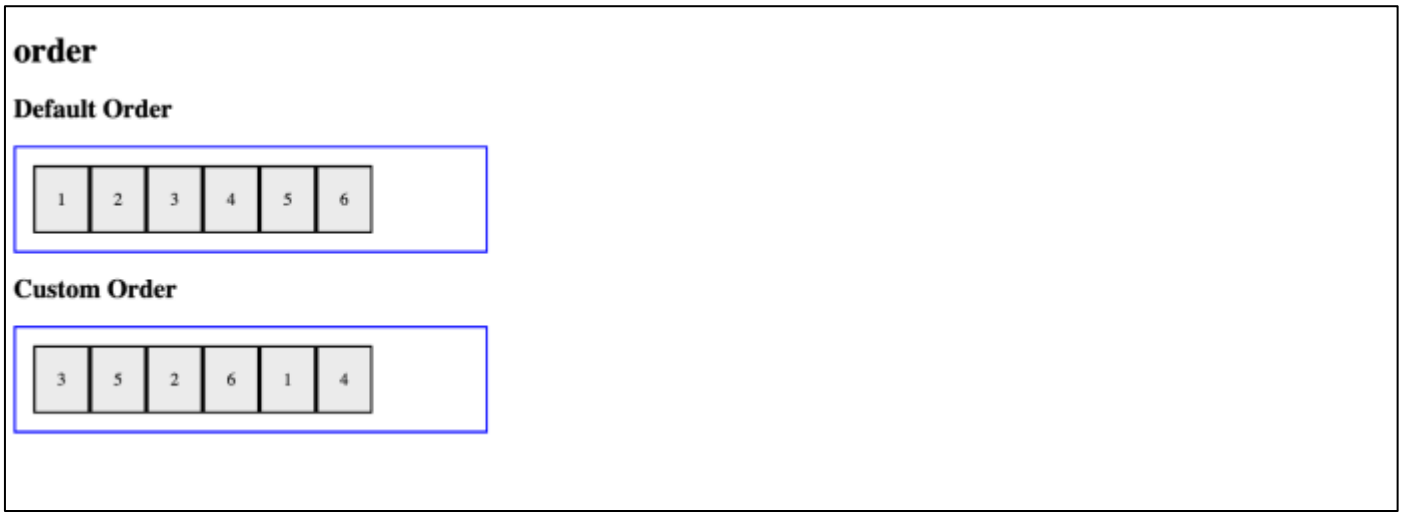
Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
    - Create an **HTML** document named **align-self.html**
    - Create a **CSS** file named **align-self.css**
2. **Element creation**
    - Add title of the page in an **<h1>** element
    - Create 4 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
        1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
        2. Add text to the .flex-item elements as shown on the screenshot
3. **Styling**

- Copy the styles from Task 1
- Add the following styles to the .flex-container class:
    1. align-items – flex-start
- Create a new class **"align-self-flex-start"** and use it to style the 2nd .flex-item element inside it with the following styles:
    1. align-self - flex-start;
- Create a new class **"align-self-center"** and use it to style the 2nd .flex-item element inside it with the following styles:
    1. align-self - center;
- Create a new class **"align-self-flex-end"** and use it to style the 2nd .flex-item element inside it with the following styles:
    1. align-self - flex-end;
- Create a new class **"align-self-baseline"** and use it to style the 2nd .flex-item element inside it with the following styles:
    1. align-self - baseline;
- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot

12. Property: Order



For full screenshot check the screenshot.png file in the folder for the task

Objective:

Create a webpage that looks like the screenshot above.

Requirements:

1. **File Setup**:
    - Create an HTML document named **order.html**
    - Create a CSS file named **order.css**
2. **Element creation**
    - Add title of the page in an **<h1>** element
    - Create 2 sets of **<h2>** element with a ** ** element with a class – "**flex-container**" as shown in the screenshot
        1. Create ** ** elements inside the .flex-container element with a class of "**flex-item**"
        2. Add text to the .flex-item elements as shown on the screenshot

3. Styling

- Copy the styles from Task 1
- Add the following styles to the .flex-container class:
    1. align-items – flex-start
- Create a new class “custom-order” and use it to style each individual .flex-item element inside it with the following styles:
    1. Item 1
        1. Order – 5
    2. Item 2
        1. Order – 3
    3. Item 3
        1. Order – 1
    4. Item 4
        1. Order – 6
    5. Item 5
        1. Order – 2
    6. Item 6
        1. Order – 4
- Apply the classes to the appropriate .flex-container elements to achieve the results shown in the screenshot