Module 3-4

CSS Flexbox

Flexbox: Introduction

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Flexboxes are specialized containers that have within them several HTML elements arranged in a specific fashion.

The flexbox will also automatically adjust to external stimuli (i.e. resizing the window).
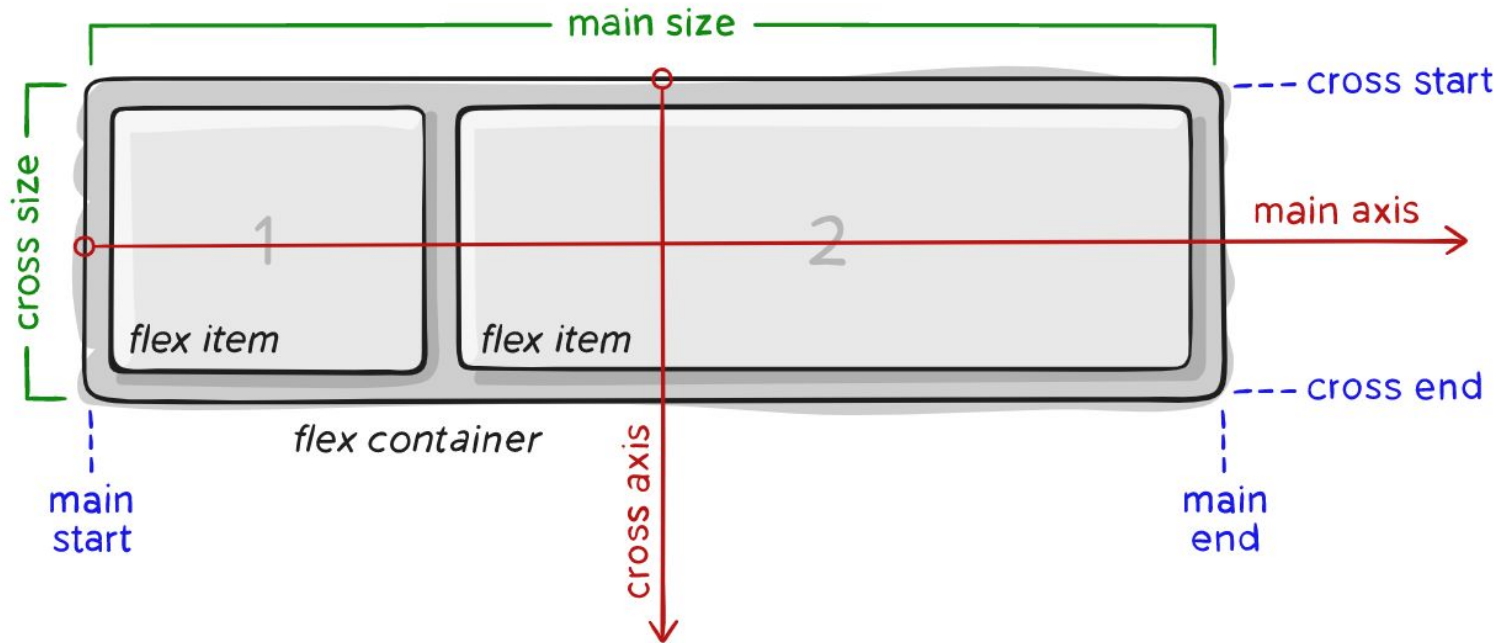
Flexbox: Defining

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To define a flexbox we must specify a display attribute with a value of grid:

```
nav {
    display: flex;
}
```

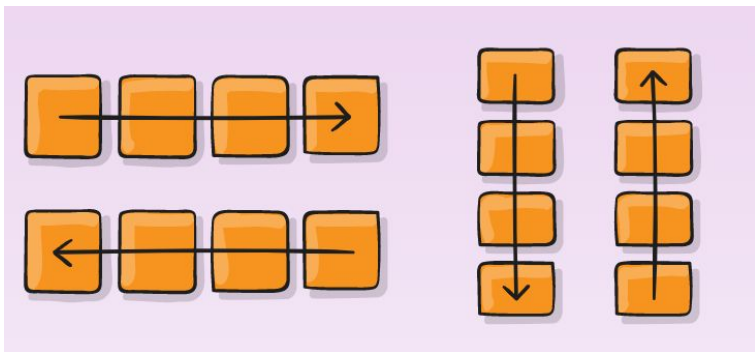Here, all HTML elements of type nav will be defined as flex boxes.
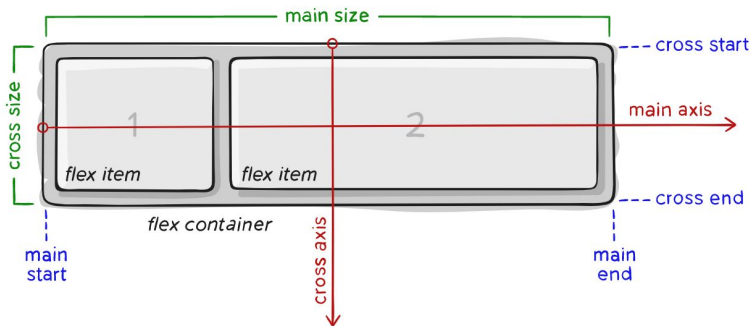
Flexbox: Anatomy

Flexbox: flex-direction

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The flex-direction attribute determines whether or not the layout of items inside the box will be in either column or rows. **The default direction is row**.
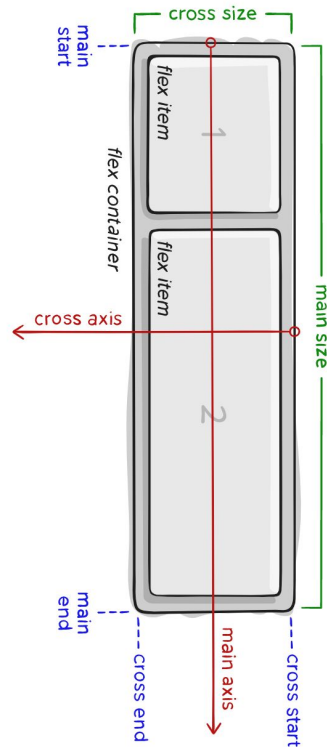


```
nav {
    display: flex;
    flex-direction: column;
}
```

Flexbox: flex-direction

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Note that the main axis and cross axis will
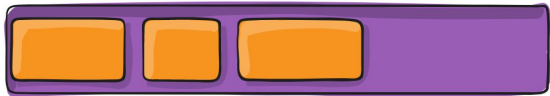differ based on the flex-direction attribute:

flex-direction: row

flex-direction: column

Flexbox: justify-content

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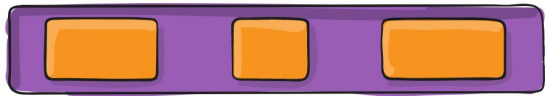The justify-content property defines how items are aligned across the main axis.
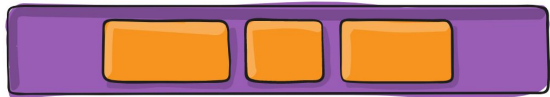

flex-start

flex-end

center

space-between

space-around

space-evenly

```
nav {
    display: flex;
    justify-content: flex-start;
}
```
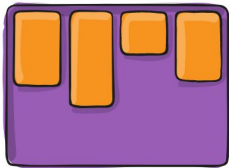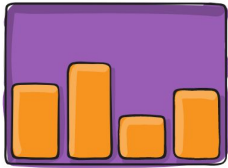
Flexbox: align-items

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The align-items property defines alignment with respect to the cross axis.

```
nav {
    display: flex;
    align-items: flex-start;
}
```
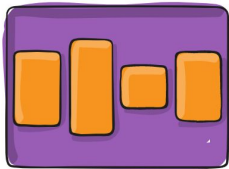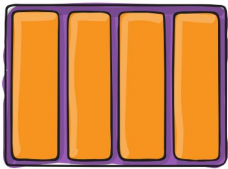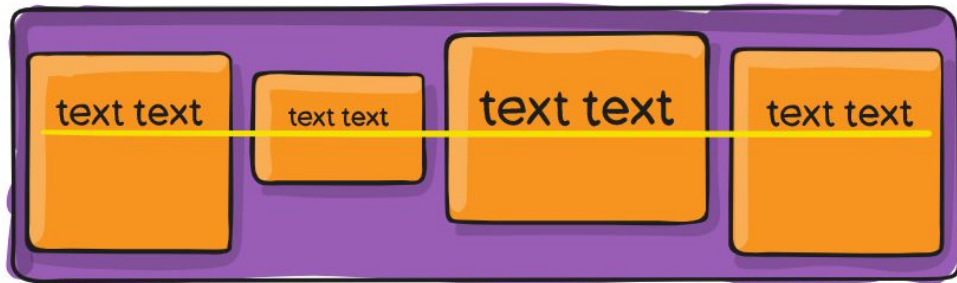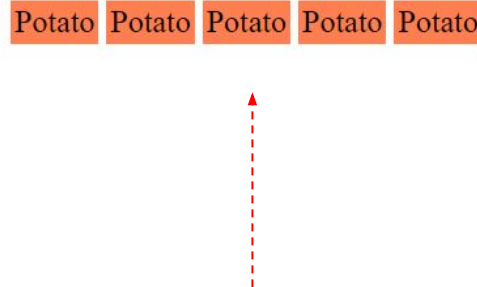
Flexbox: basis

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The flex-basis property defines the initial size of items
inside the flexbox:

```css
.test-flex-box {
    display: flex;
    flex-direction: row;
    width: 500px;
    flex-basis: 150px;
}
.child {
    background-color: coral;
    margin: 2px;
    padding: 2px;
}
```

```html
<div class='test-flex-box'>
        <div class ='child'>Potato</div>
        <div class ='child'>Potato</div>
        <div class ='child'>Potato</div>
        <div class ='child'>Potato</div>
        <div class ='child'>Potato</div>
</div>
```

| Potato | Potato | Potato | Potato | Potato |

All items inside
the box have a
width of 150 px.

Flexbox: overriding the basis

— — —

```css
.test-flex-box {
    display: flex;
    flex-direction: row;
    flex-basis: 150px;
    width: 500px;
}
.child {
    background-color: coral;
    margin: 2px;
    padding: 2px;

}
.child:nth-child(2) {
    background-color: crimson;
    margin: 2px;
    padding: 2px;
    flex-grow: 2;
}
```

We can select specific child items with the nth-child selector. Here, the second child is selected.

We can specify how much the item inside the flexbox will grow with respect to the other items in the box. Here, it will grow twice as fast if the flexbox expands.

| Potato | Potato | Potato | Potato | Potato |

Let's do some coding!

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