

# FLEXBOX & GRID

— EXPLICIT & IMPLICIT GRID —



**IN A ROCKET**

*Learn front-end development at rocket speed*

“**Grid Layout** controls the layout of its content through the use of a grid: an intersecting set of horizontal and vertical lines which create a sizing and positioning coordinate system for the grid container’s contents.”

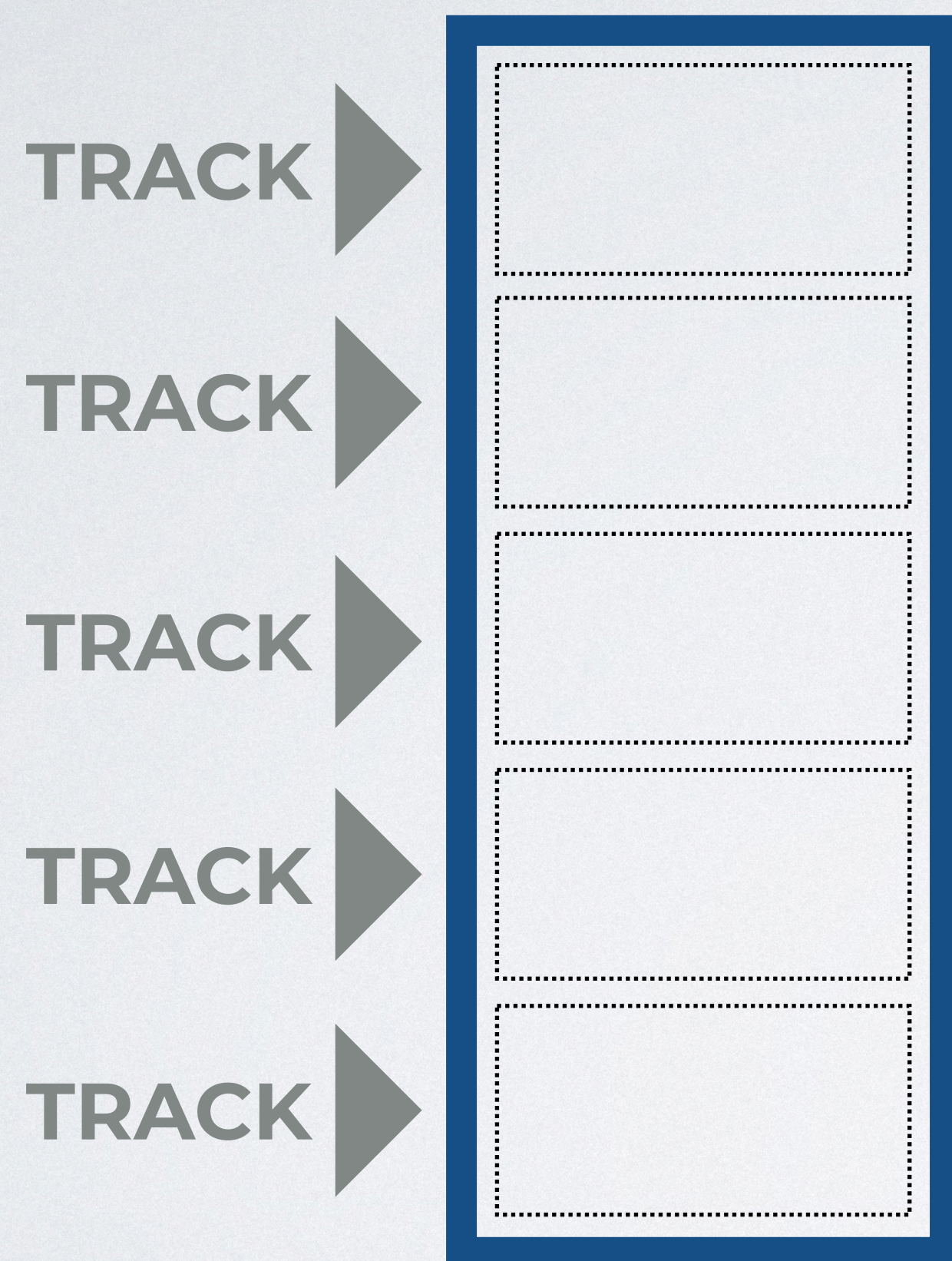


SOURCE: [CSS Grid Layout Module Level 1](#) by W3C.

# EXPLICIT GRID

~ ~ ~

```
grid-template-rows: 50px 50px 50px 50px 50px
```



```
grid-template-columns: 100px 100px 100px 100px 100px
```

TRACK

TRACK

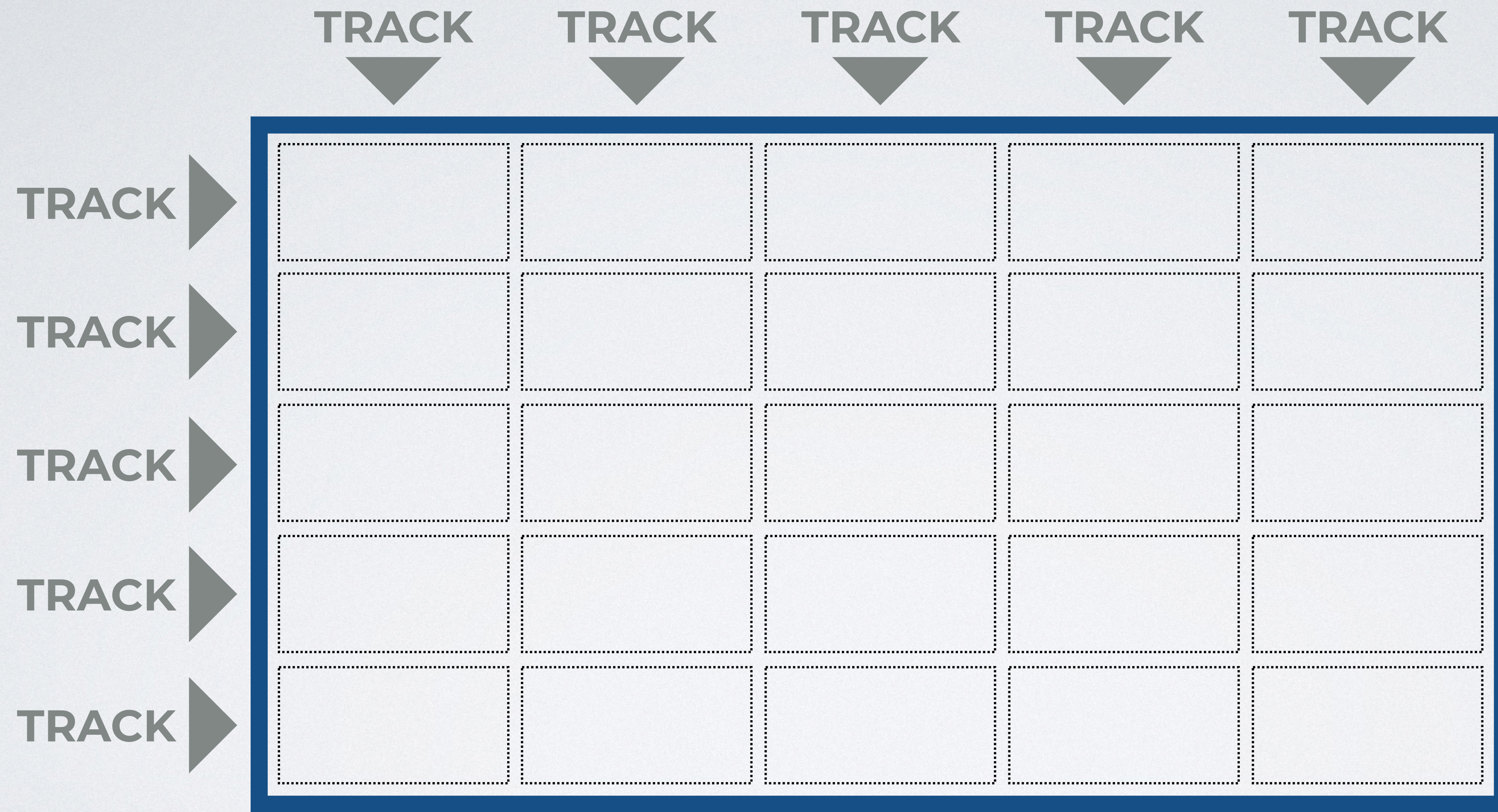
TRACK

TRACK

TRACK



```
grid-template-rows: 50px 50px 50px 50px 50px  
grid-template-columns: 100px 100px 100px 100px 100px
```



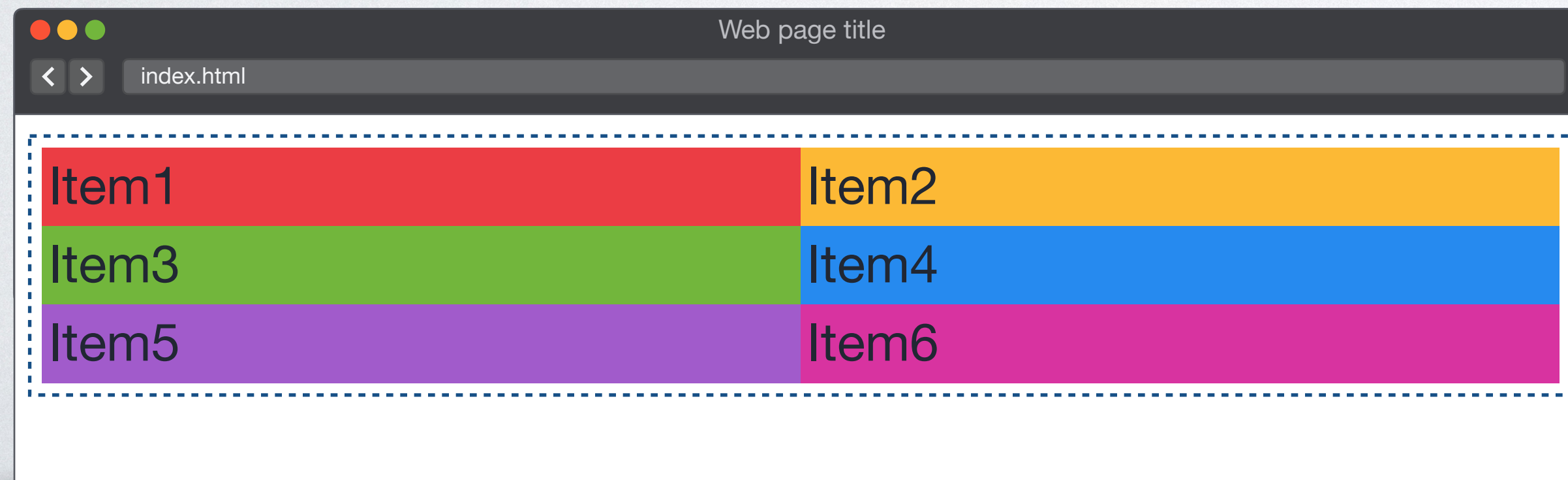
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
  <div>Item5</div>
  <div>Item6</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-template-rows: 100px 100px 100px;
  grid-template-columns: 50% 50%;
}
```

## Browser



container

# EXPLICIT GRID

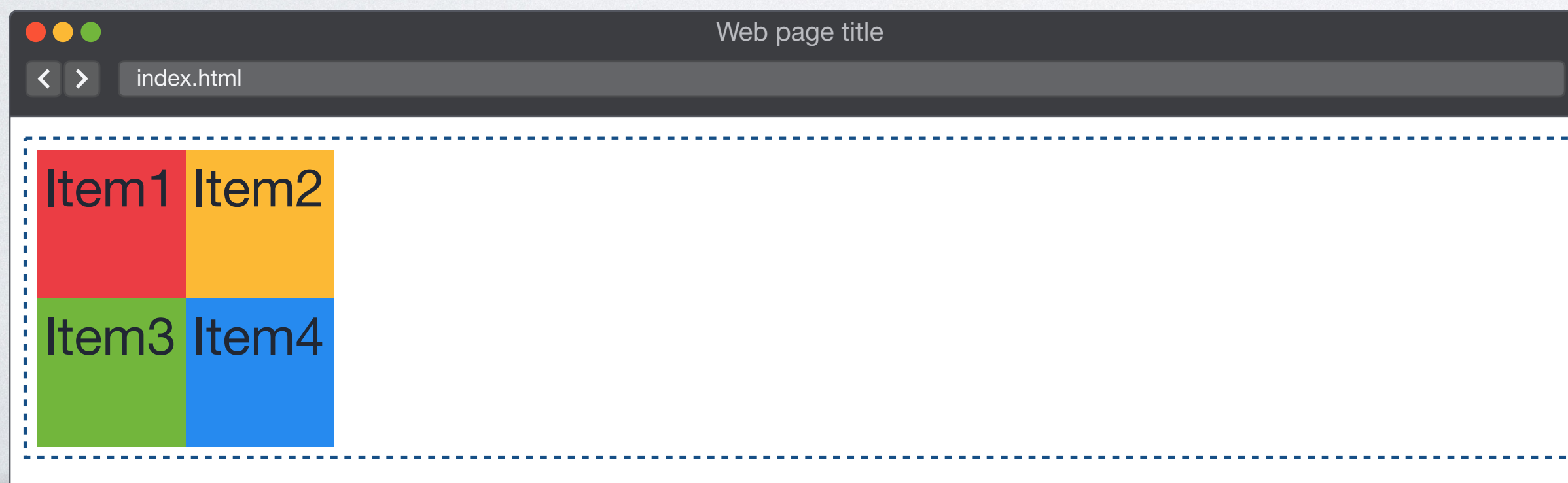
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-template-rows: 100px 100px;
  grid-template-columns: 100px 100px;
}
```

## Browser





# EXPLICIT GRID

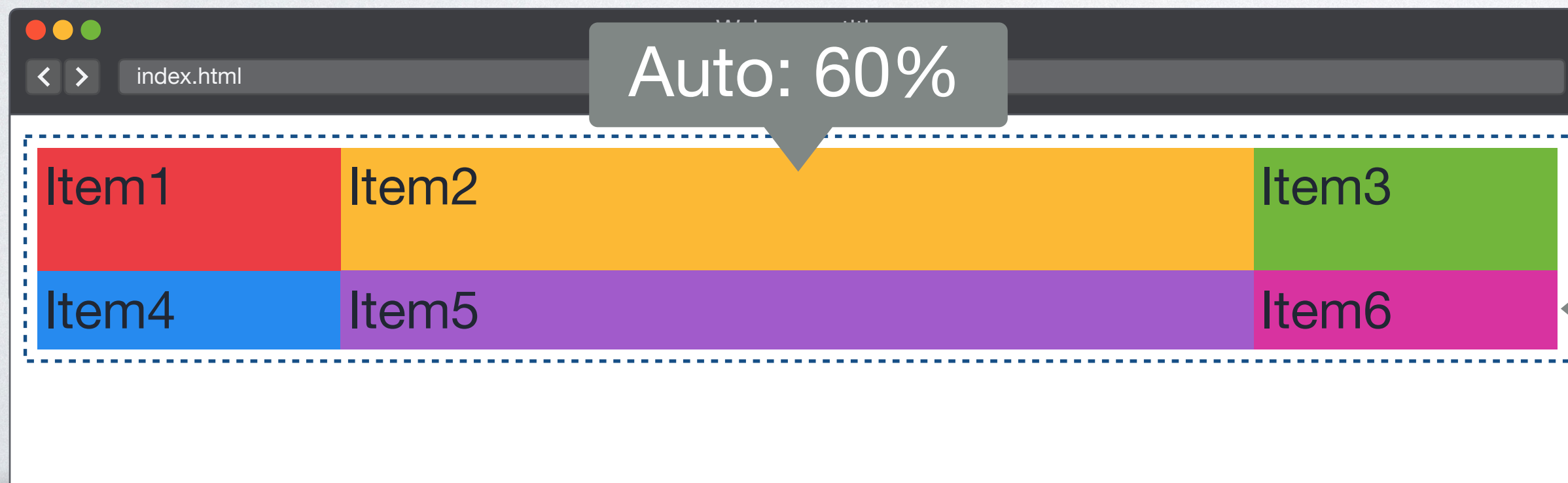
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
  <div>Item5</div>
  <div>Item6</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-template-rows: 100px auto;
  grid-template-columns: 20% auto 20%;
}
```

## Browser



Auto: height determined by content

# EXPLICIT GRID

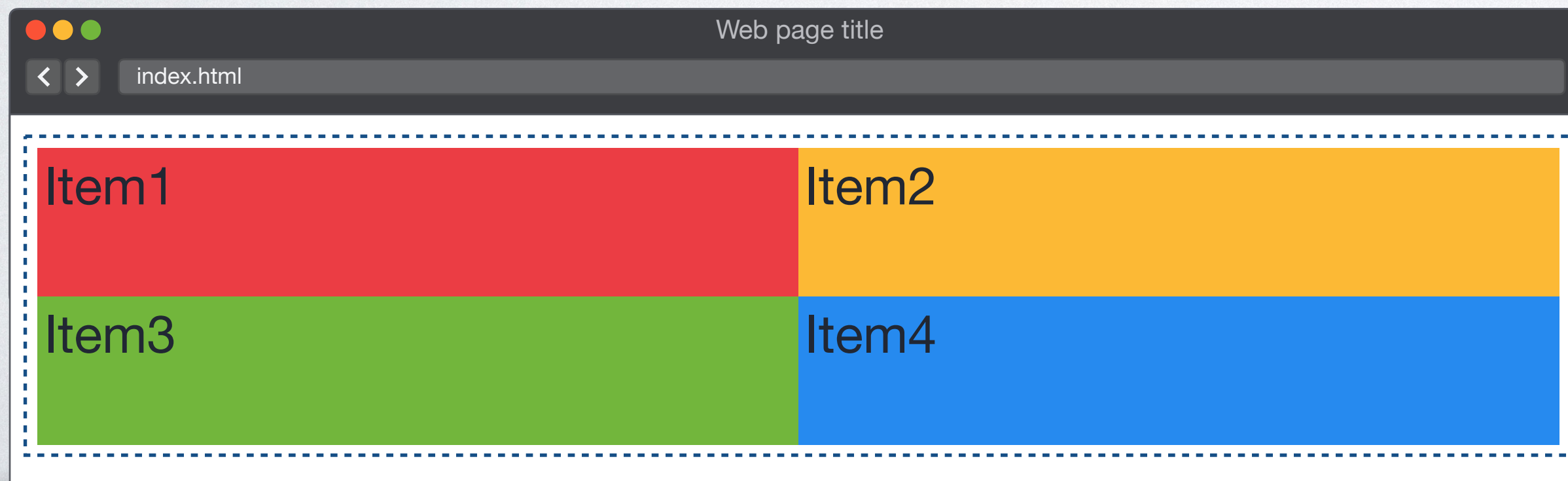
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-template-rows: 50vh 50vh;
  grid-template-columns: 50vw 50vw;
}
```

## Browser



**grid-template:**

*rows / columns*

**grid-template:**

200px 200px

/

50% 50%

=

grid-template-rows: 200px 200px

grid-template-columns: 50% 50%

# SHORTHAND

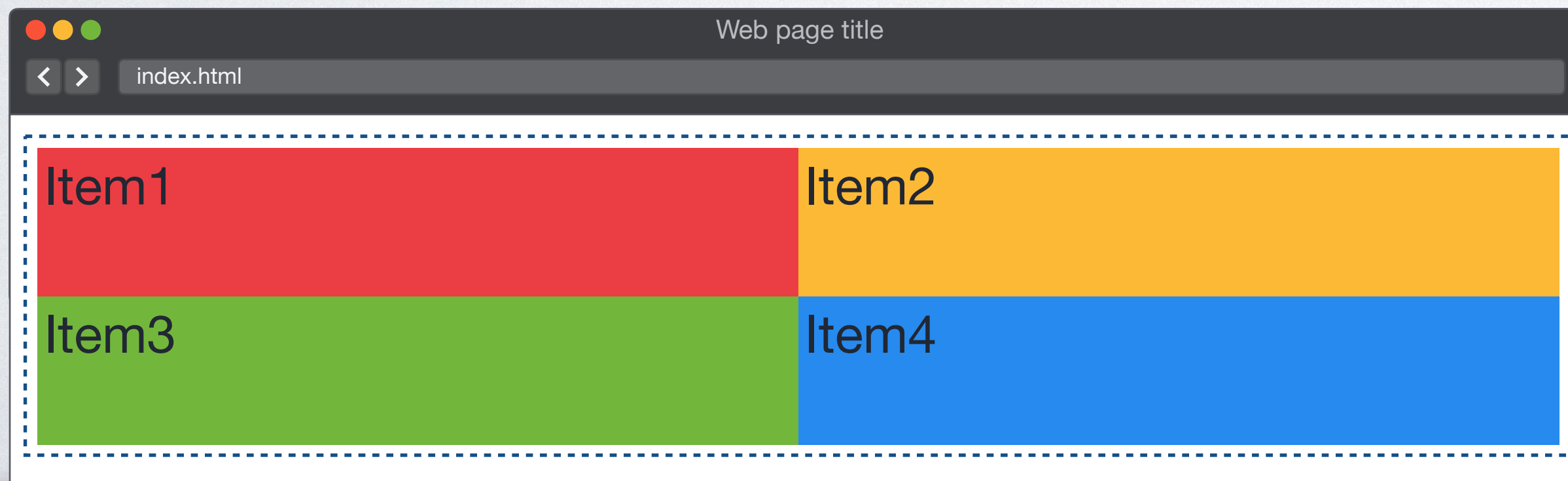
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-template: 50vh 50vh / 50vw 50vw;
}
```

## Browser



# IMPLICIT GRID

~ ~ ~

“If you place something outside of the defined grid—or due to the amount of content, more grid tracks are needed—then the grid creates rows and columns in the implicit grid. These tracks will be auto-sized by default, resulting in their size being based on the content that is inside them.”



SOURCE: [Basic concepts of grid layout by MDN.](#)

## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
  <div>Item5</div>
  <div>Item6</div>
</div>
</body>
```

6

## CSS

```
.container {
  display: grid;
  grid-template-rows: 100px 100px;
  grid-template-columns: 50% 50%;
}
```

1 2  
3 4

## Browser



implicit row (height: auto)



# IMPLICIT GRID: FIREFOX GRID INSPECTOR

The screenshot shows a browser window with a page titled "Implicit grid" containing a grid of 8 items. The items are arranged in a 2x4 grid. The first two columns contain items Item1 (red), Item2 (yellow), Item3 (green), and Item4 (blue). The last two columns are empty. A callout box points to the right edge of the grid, labeled "end of explicit grid".

The Firefox Grid Inspector is open, showing the following CSS rules:

```
element {  
  display: # grid;  
  grid-template-rows: 100px 100px;  
  grid-template-columns: 30% 30%;  
}  
.container {  
  border: 2px dotted black;  
}  
* {  
  box-sizing: border-box;  
}
```

The Grid Display Settings are:

- Overlay Grid:  div.container
- Grid Display Settings:
  - Display line numbers:
  - Display area names:
  - Extend lines infinitely:

“You can also define a set size for tracks created in the implicit grid with the **grid-auto-rows** and **grid-auto-columns** properties.”



SOURCE: [Basic concepts of grid layout by MDN.](#)

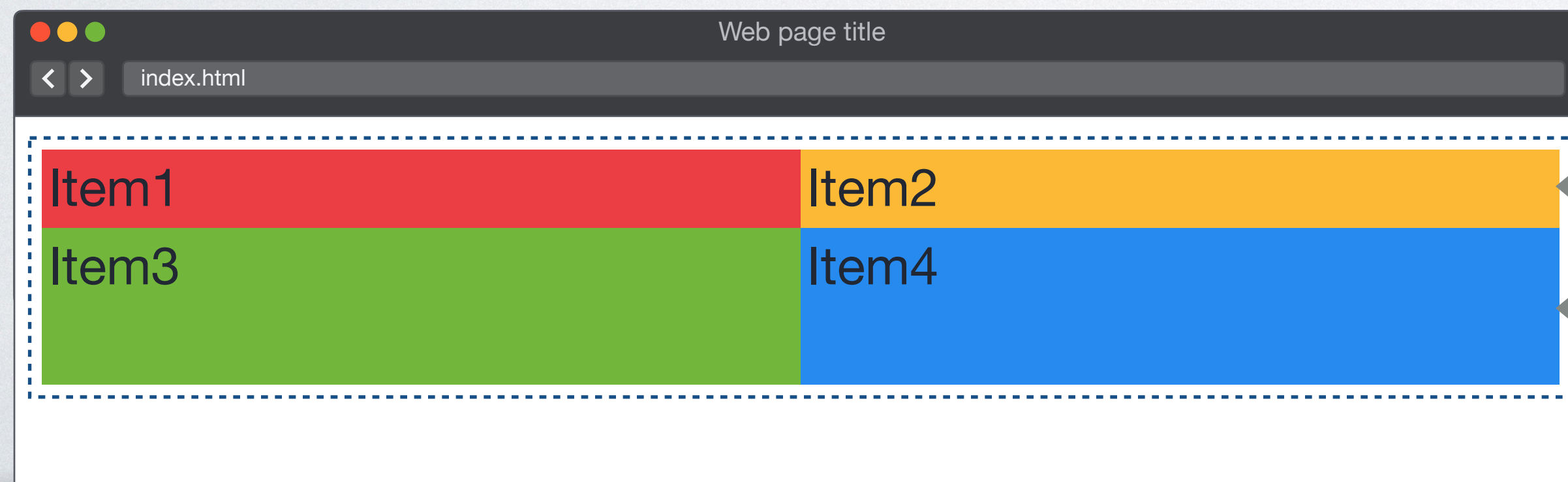
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-template: 100px / 50% 50%;
  grid-auto-rows: 200px;
}
```

## Browser



explicit: 100px

auto-row: 200px

# IMPLICIT GRID: AUTO ROWS & COLUMNS

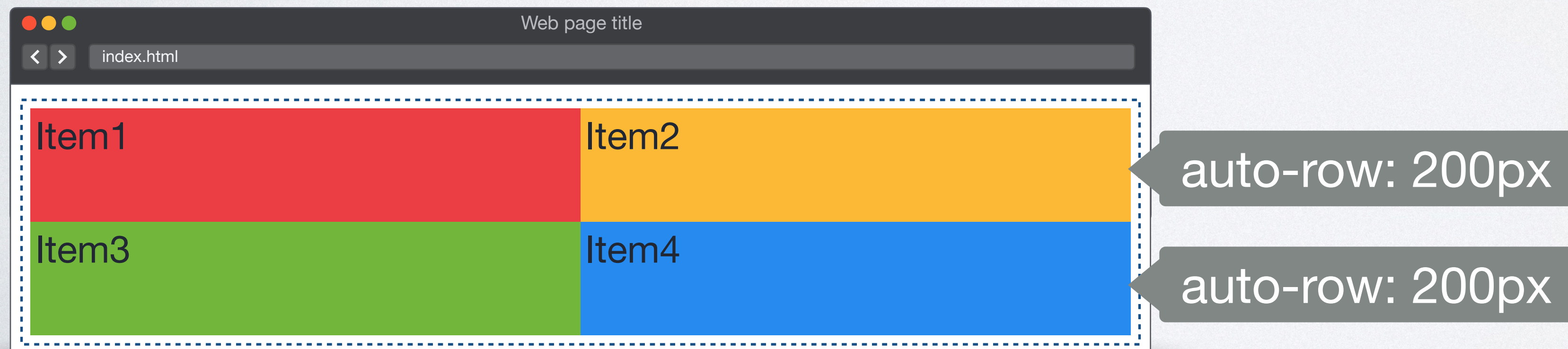
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-auto-rows: 200px;
  grid-template-columns: 50% 50%;
}
```

## Browser



# IMPLICIT GRID: AUTO ROWS & COLUMNS

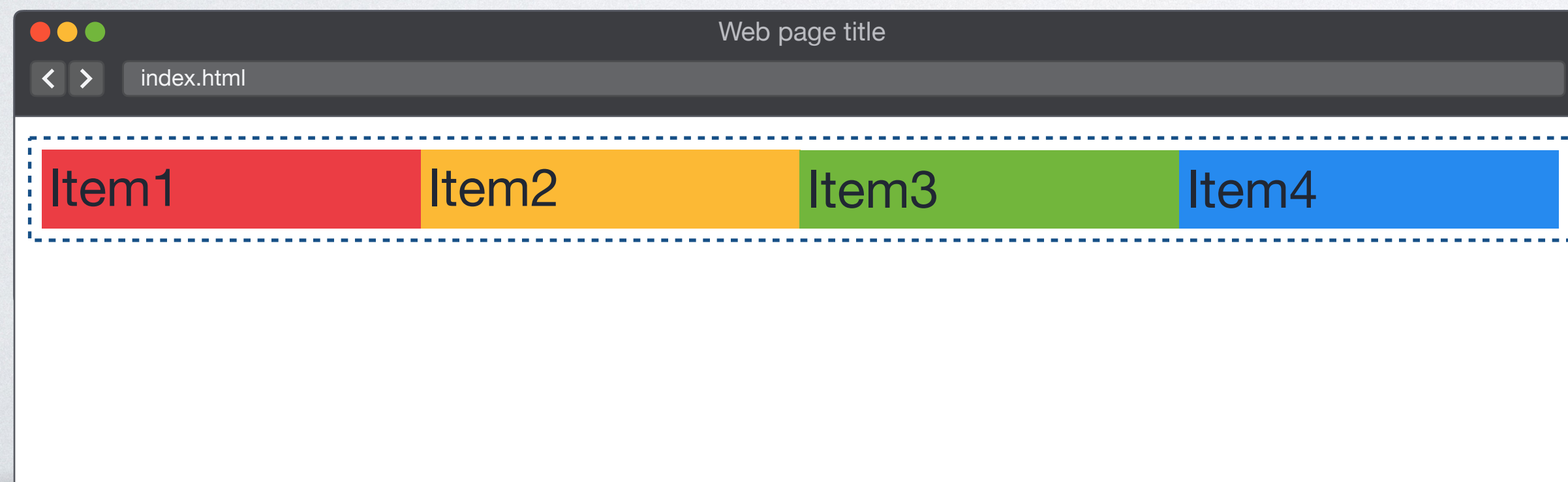
## HTML

```
<body>
<div class="container">
  <div>Item1</div>
  <div>Item2</div>
  <div>Item3</div>
  <div>Item4</div>
</div>
</body>
```

## CSS

```
.container {
  display: grid;
  grid-auto-flow: column;
}
```

## Browser



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