Web Programming

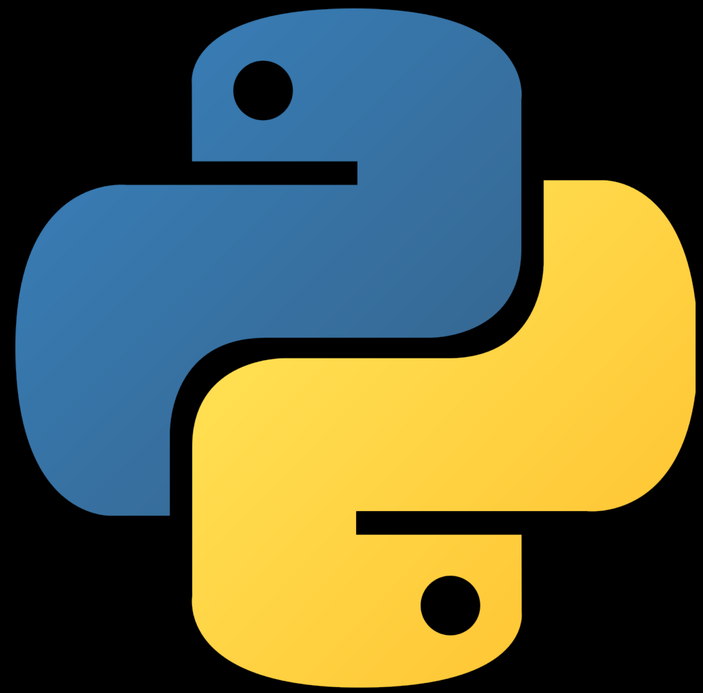
with Python and JavaScript

Web Programming

HTML and CSS

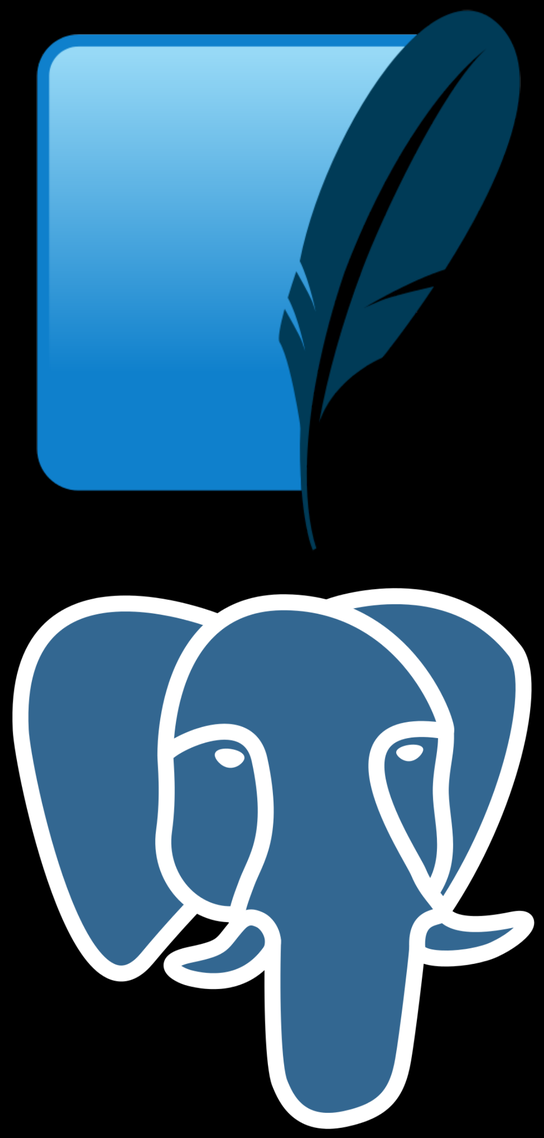
Git

Python

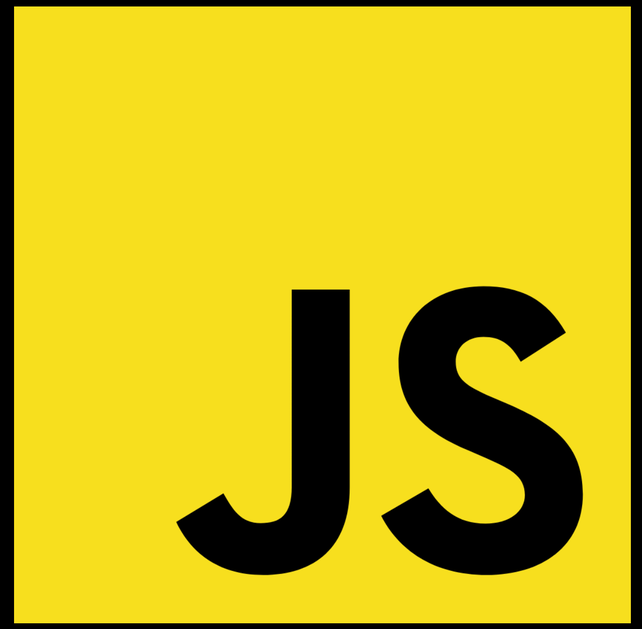


Django

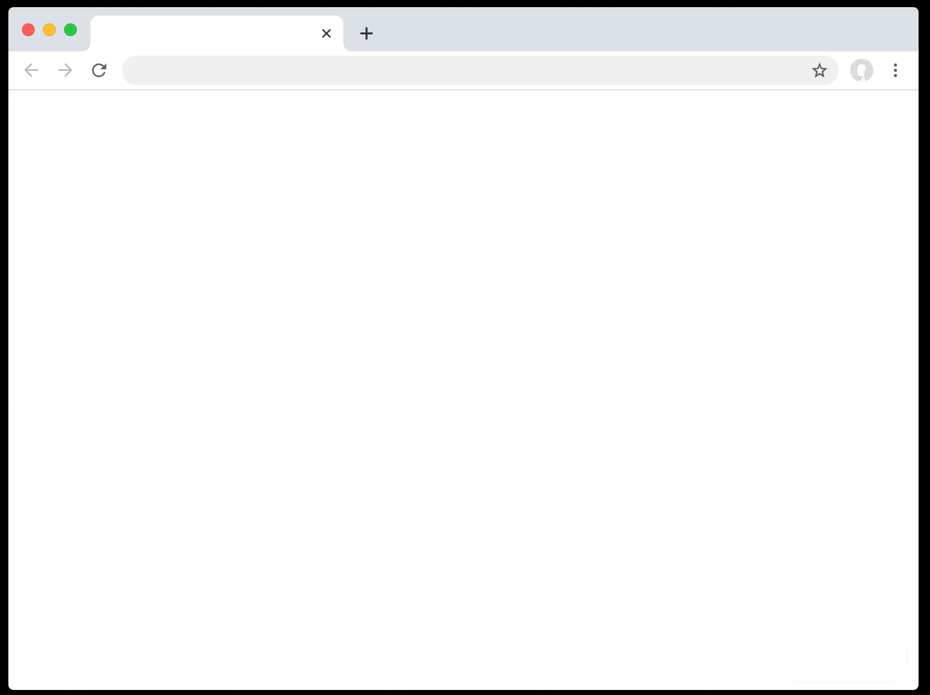
SQL, Models, and Migrations



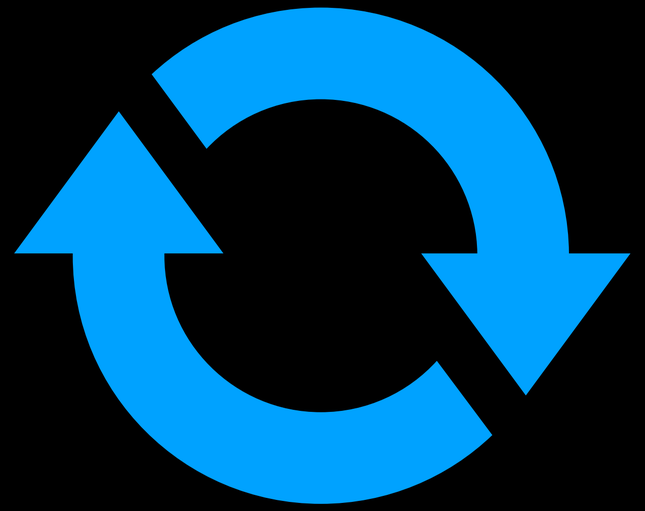
JavaScript



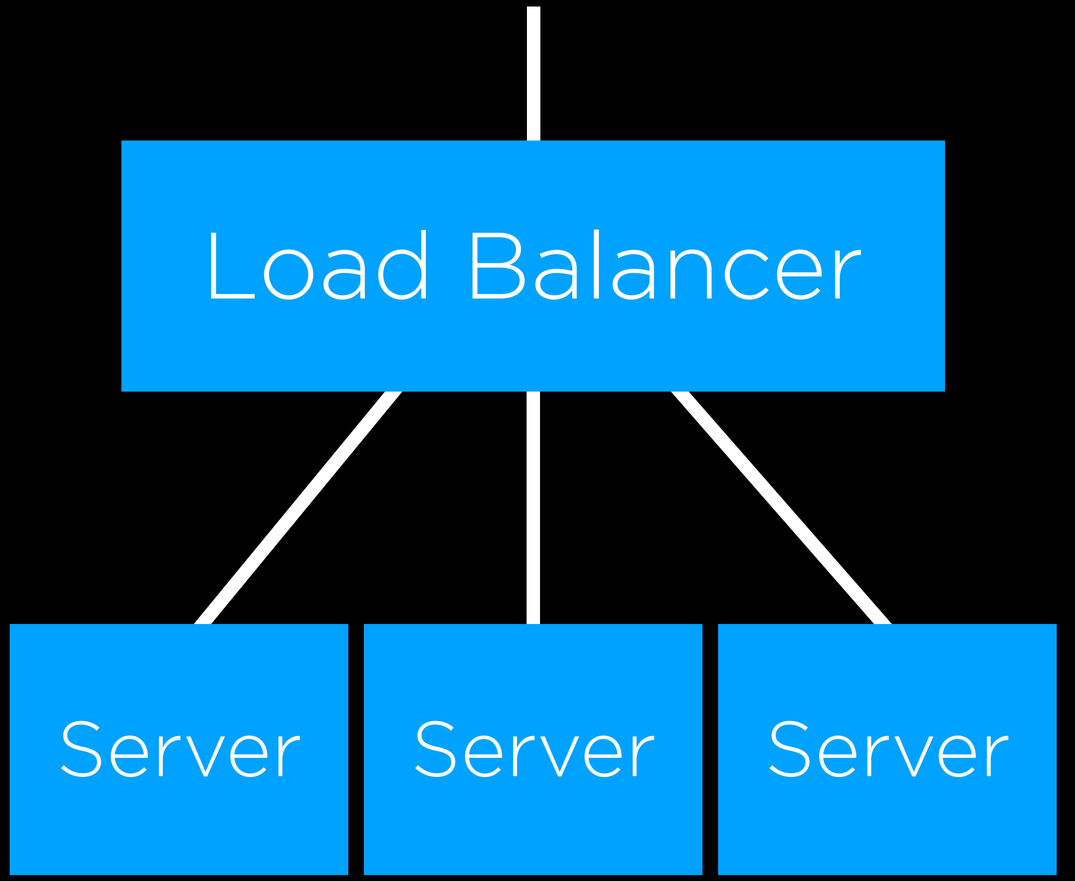
User Interfaces



Testing and CI/CD



Scalability and Security



HTML and CSS

HTML

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Hello!</title>
    </head>
    <body>
        Hello, world!
    </body>
</html>
```

```
<!DOCTYPE html>
<html lang="en">
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Document Object Model

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<!DOCTYPE html>
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    <head>
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    </head>
    <body>
        Hello, world!
    </body>
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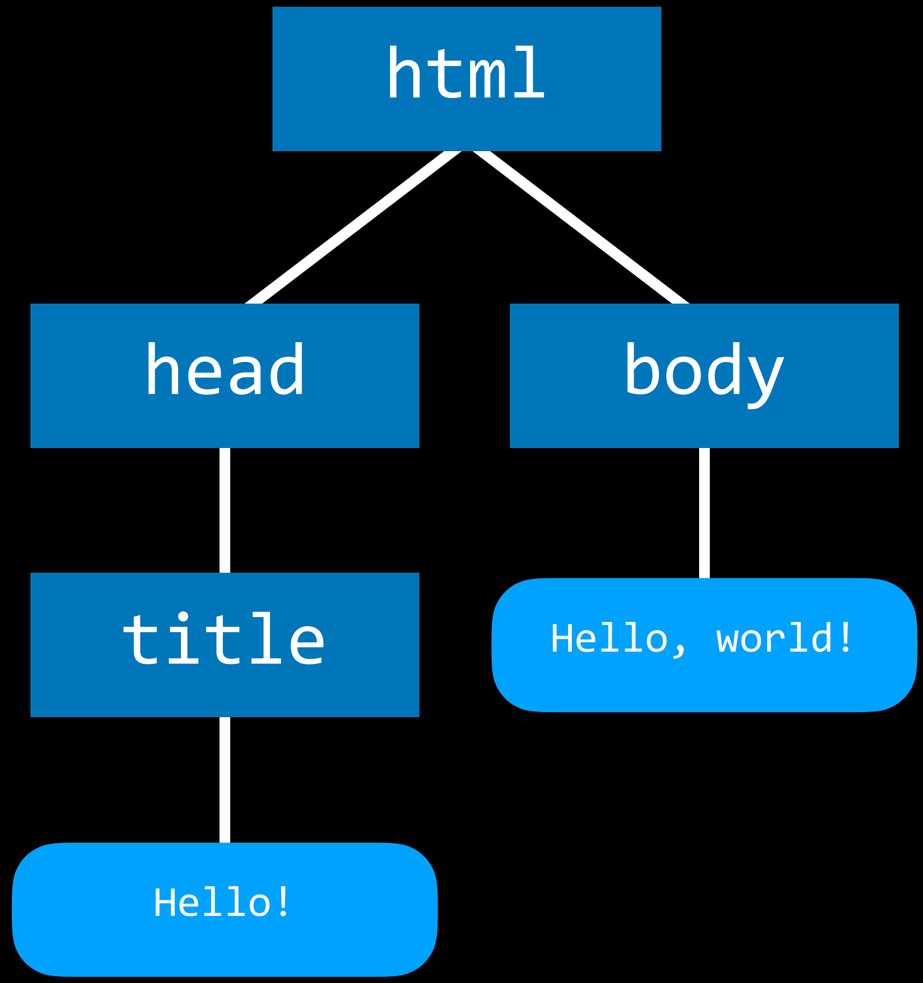


Common HTML Tags

- <h1>, <h2>, ..., <h6>
- <ol>, <ul>
- <img>
- <a>
- <table>
- <form>
- ...

CSS

Common CSS Properties

- color
- text-align
- width, height
- margin, padding
- font-family, font-size, font-weight
- border
- ...

Identifying Elements

- `div`
- `span`
- `id`
- `class`

Specificity

1. inline
2. id
3. class
4. type

Specificity

```
<div id="foo">
    Hello!
</div>
```

```
div {
  color: blue;
}
```

Hello!

Specificity

```
<div id="foo">
    Hello!
</div>
```

```
div {
  color: blue;
}

#foo {
  color: red;
}
```

Specificity

```
<div id="foo">
    Hello!
</div>
```

```
#foo {
  color: red;
}

div {
  color: blue;
}
```

Hello!

CSS Selectors

`a, b`	Multiple Element Selector
`a b`	Descendant Selector
`a > b`	Child Selector
`a + b`	Adjacent Sibling Selector
`[a=b]`	Attribute Selector
`a:b`	Pseudoclass Selector
`a::b`	Pseudoelement Selector

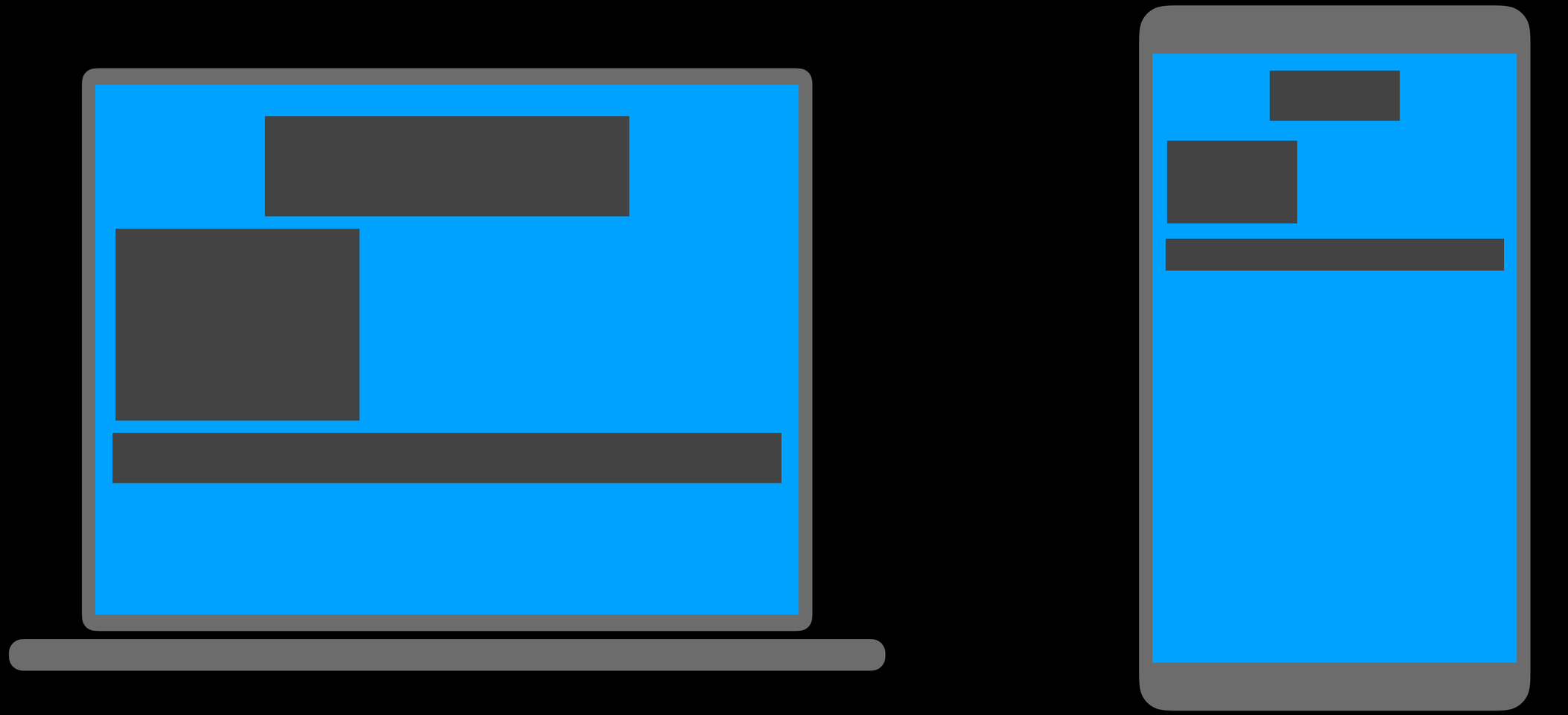
Responsive Design

Responsive Design

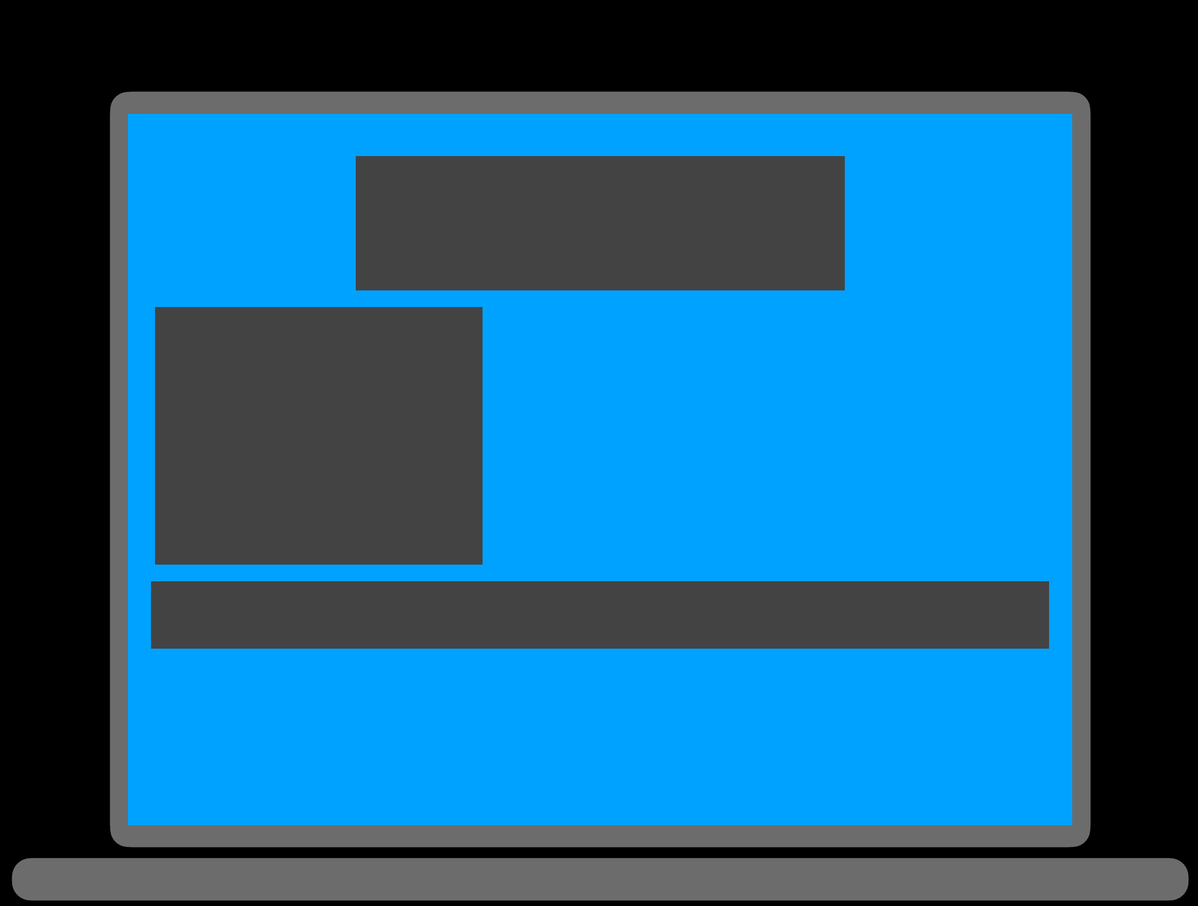
- `viewport`
- Media Queries
- Flexbox
- Grids

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

Viewport



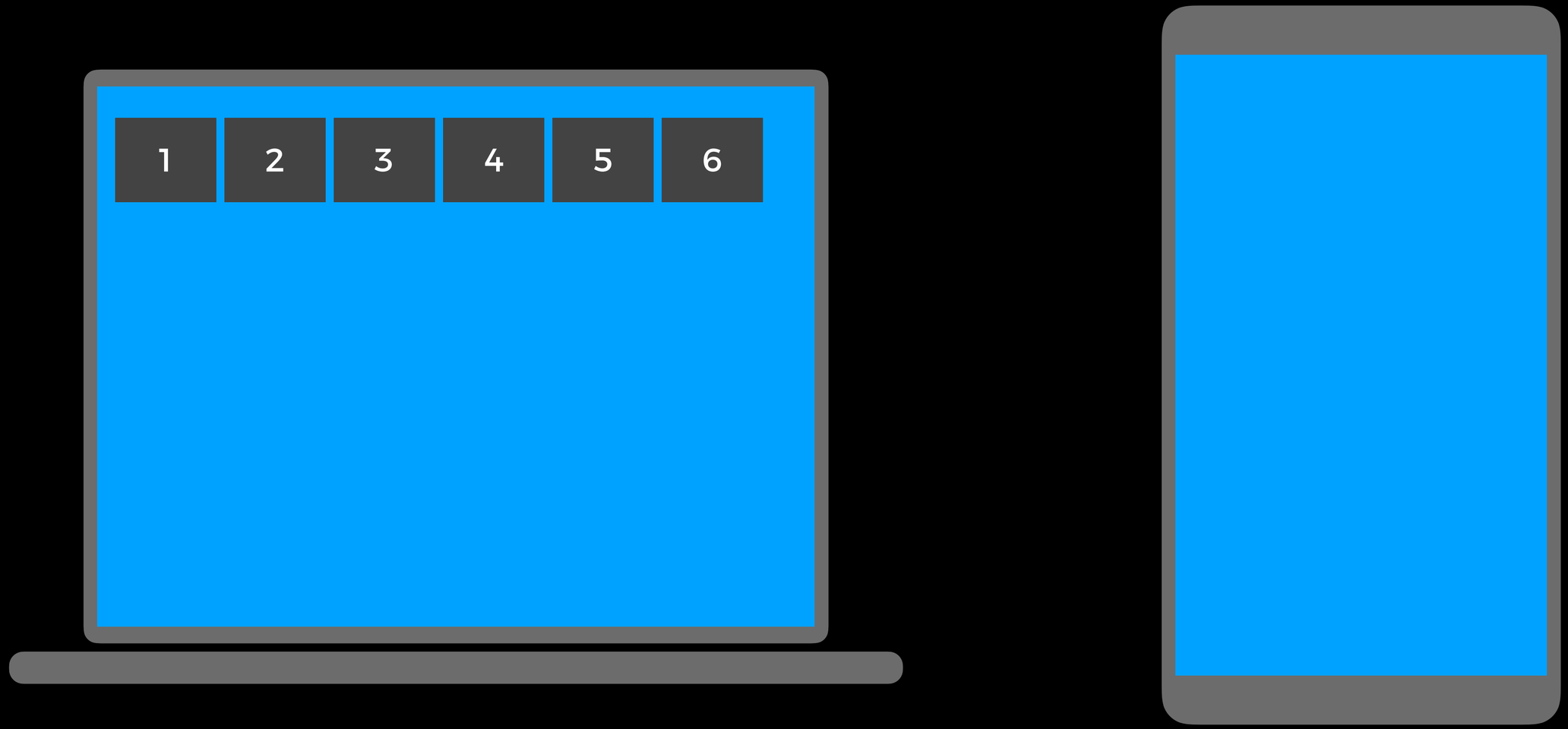
Viewport



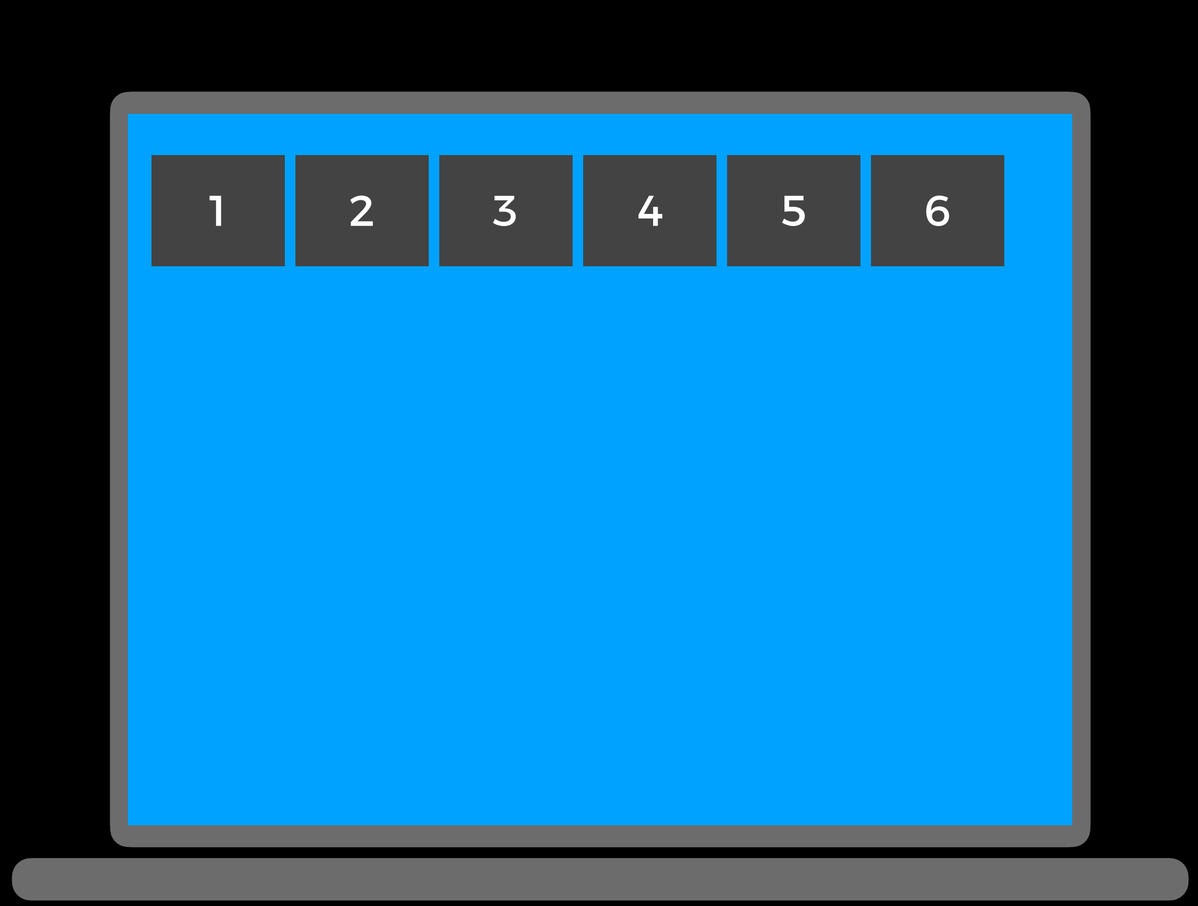
Media Queries

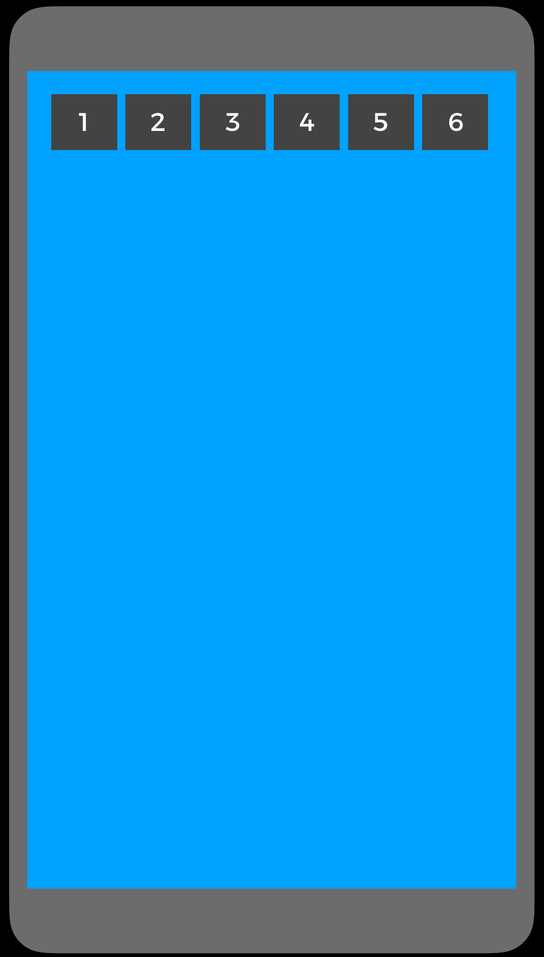
- **Media Types**: `print`, `screen`, …
- **Media Features**: `height`, `width`, `orientation`, …

Flexbox

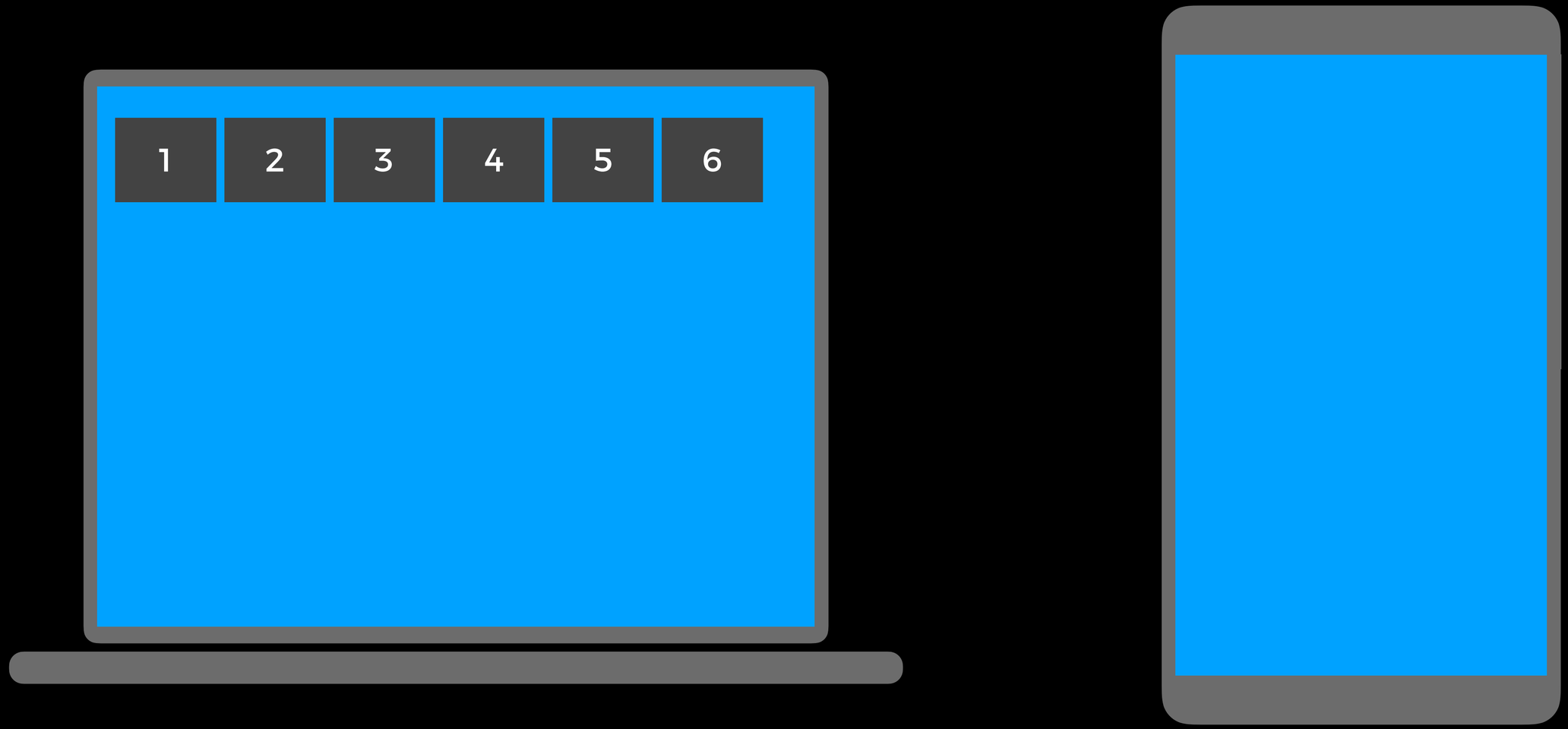


Flexbox

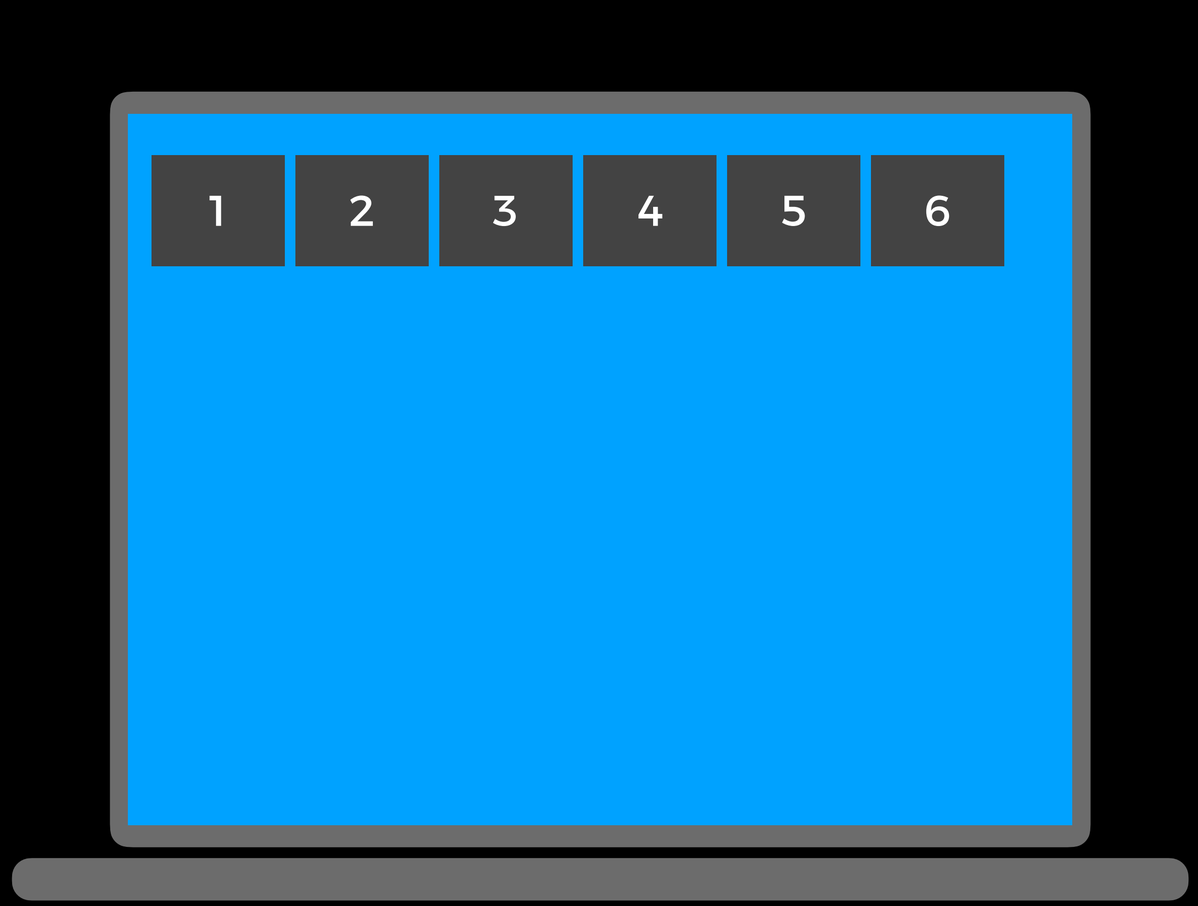


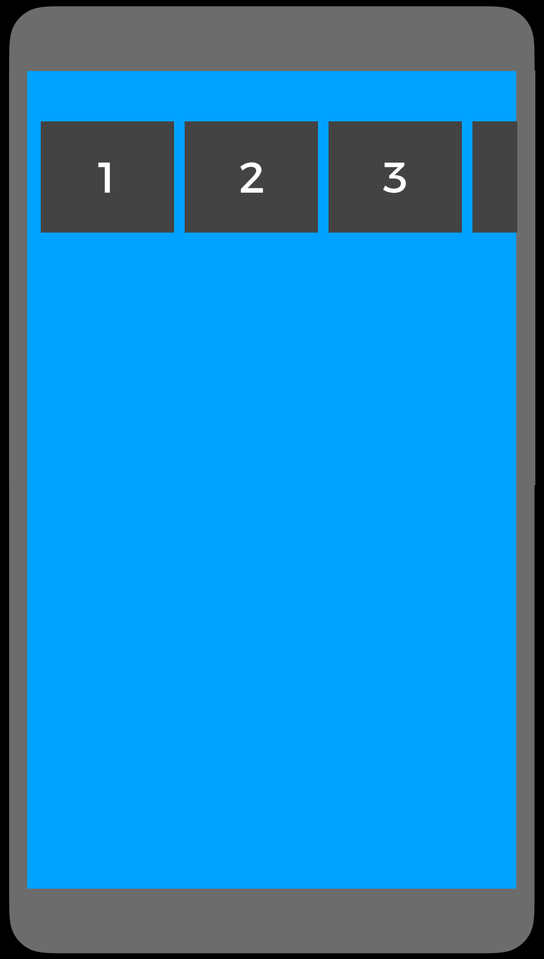


Flexbox

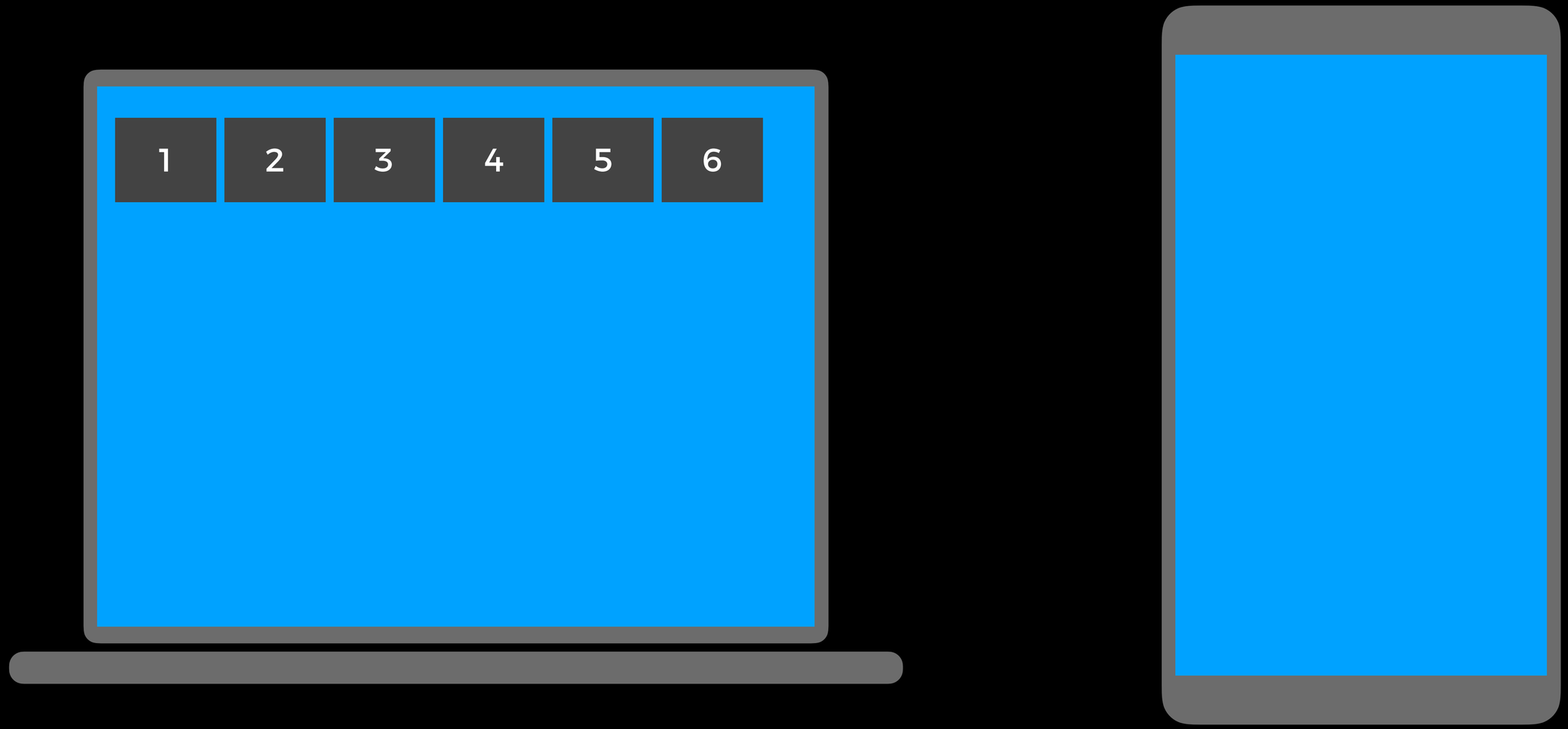


Flexbox





Flexbox



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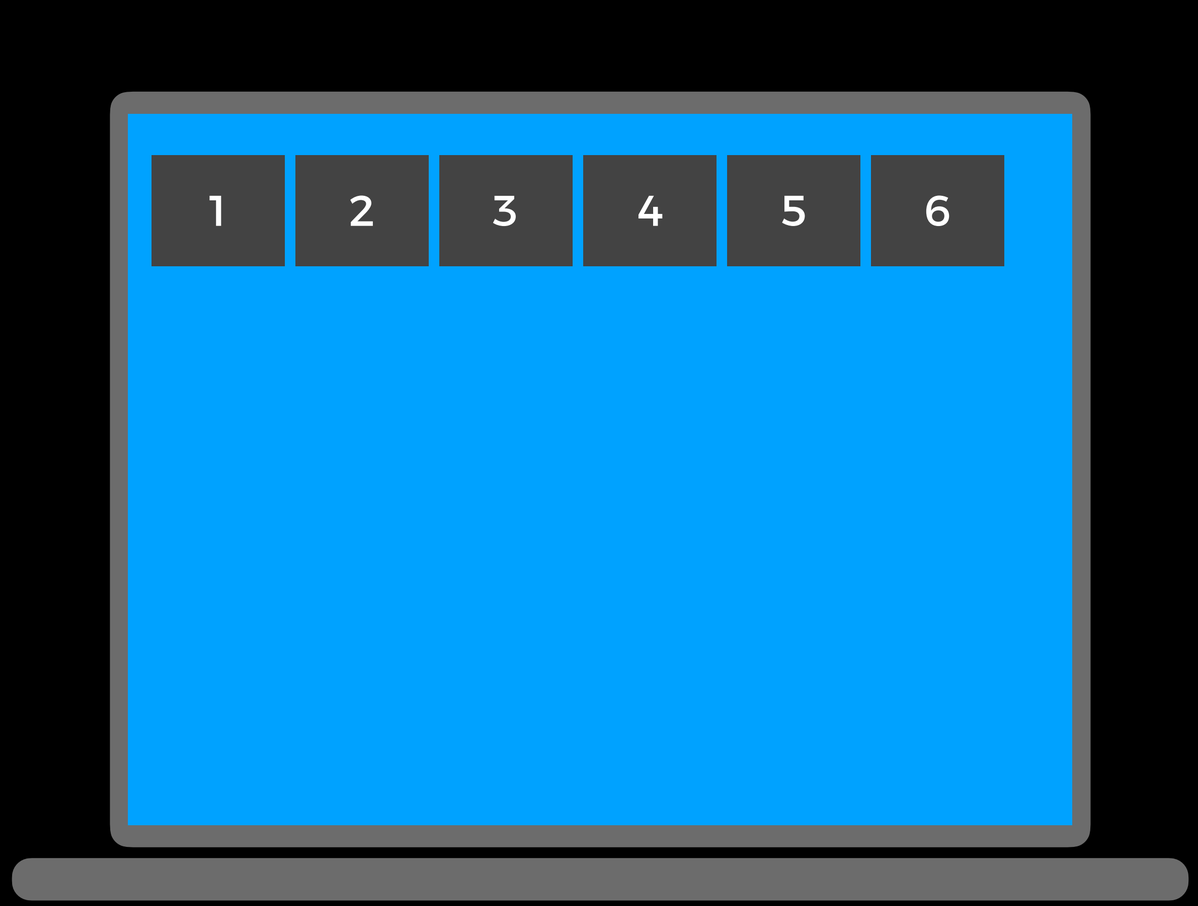

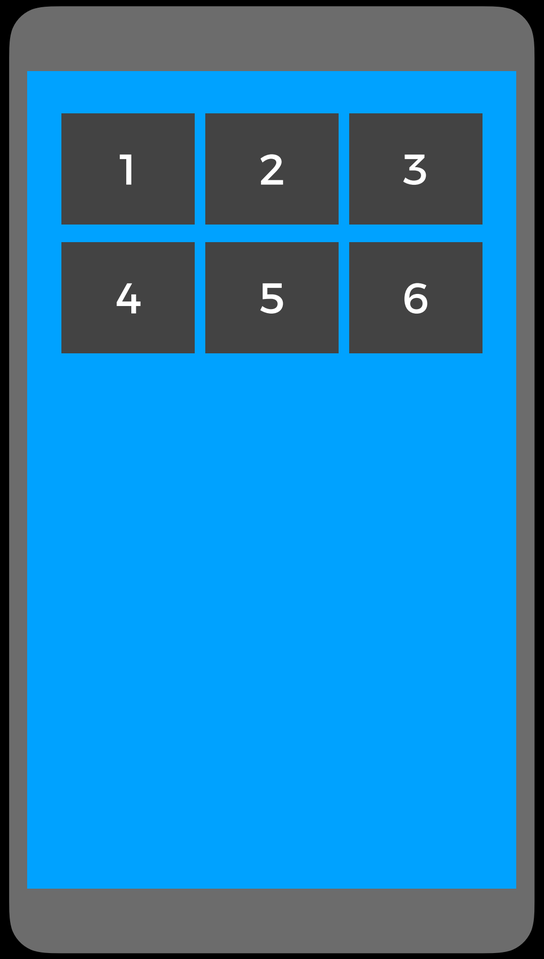

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