

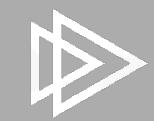
Considering Right-to-left Languages



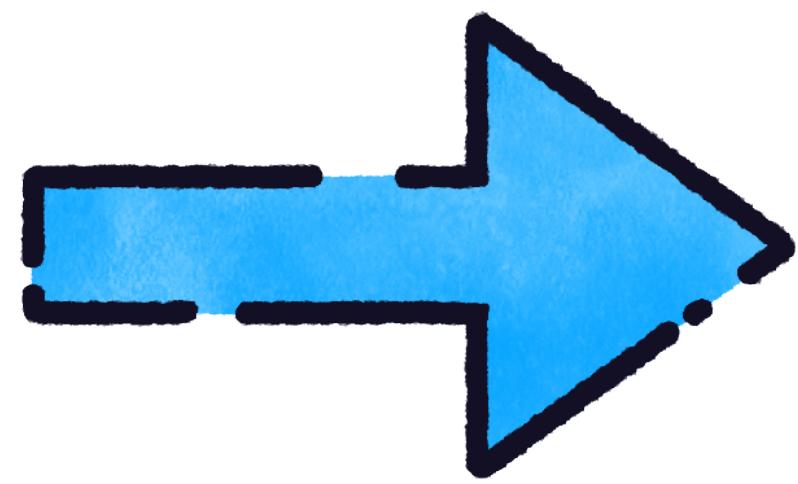
Alisa Duncan

Developer | Google Developer Expert

linkedin.com/in/jalisaduncan/ | alisaduncan.dev

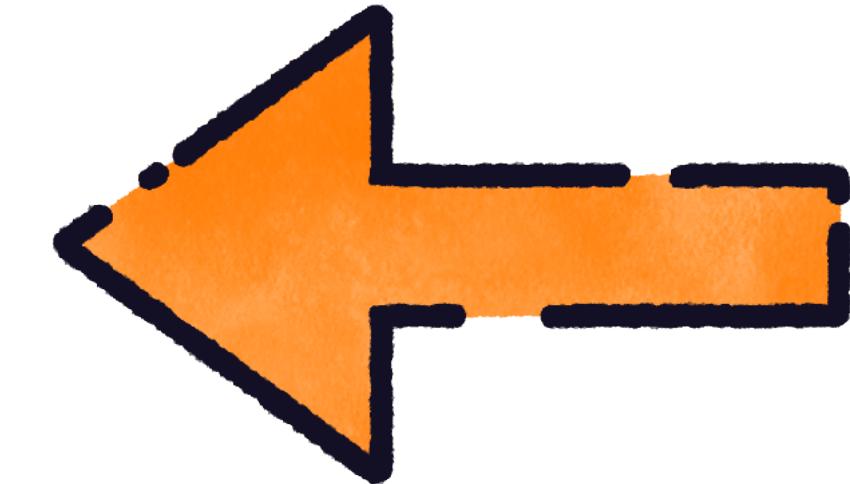


Directionality



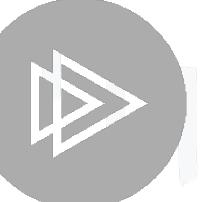
Left-to-right

**Content direction flows from
left to right (LTR)**

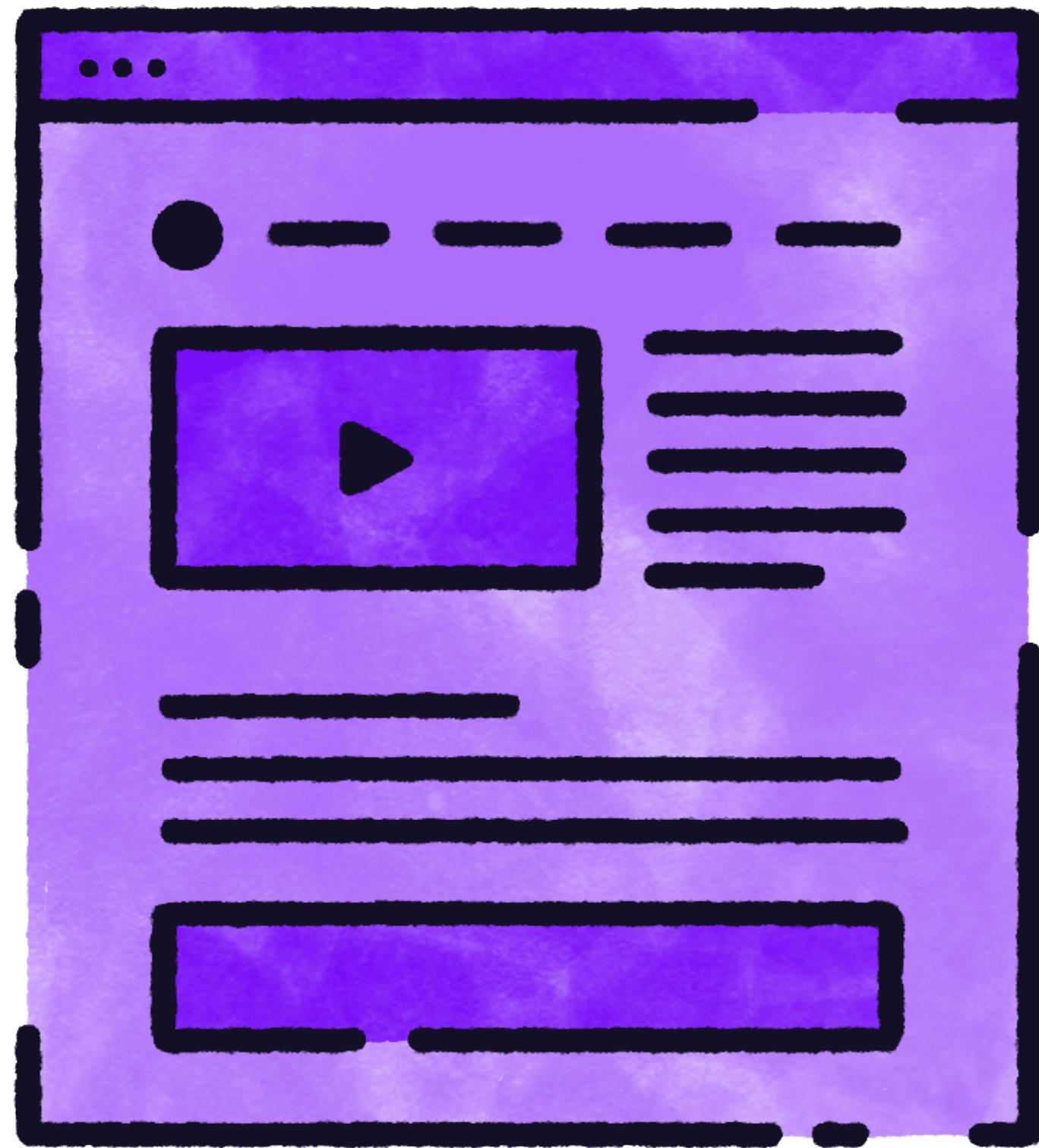


Right-to-left

**Content direction flows from
right to left (RTL)**



RTL User Design



Mirroring

Context and prioritization of elements



Identify Elements to Mirror

Mirror

vs.

Stays the same

UI layout

Icons depicting direction or text

Linear progression

Charts and graphs

Circular progression

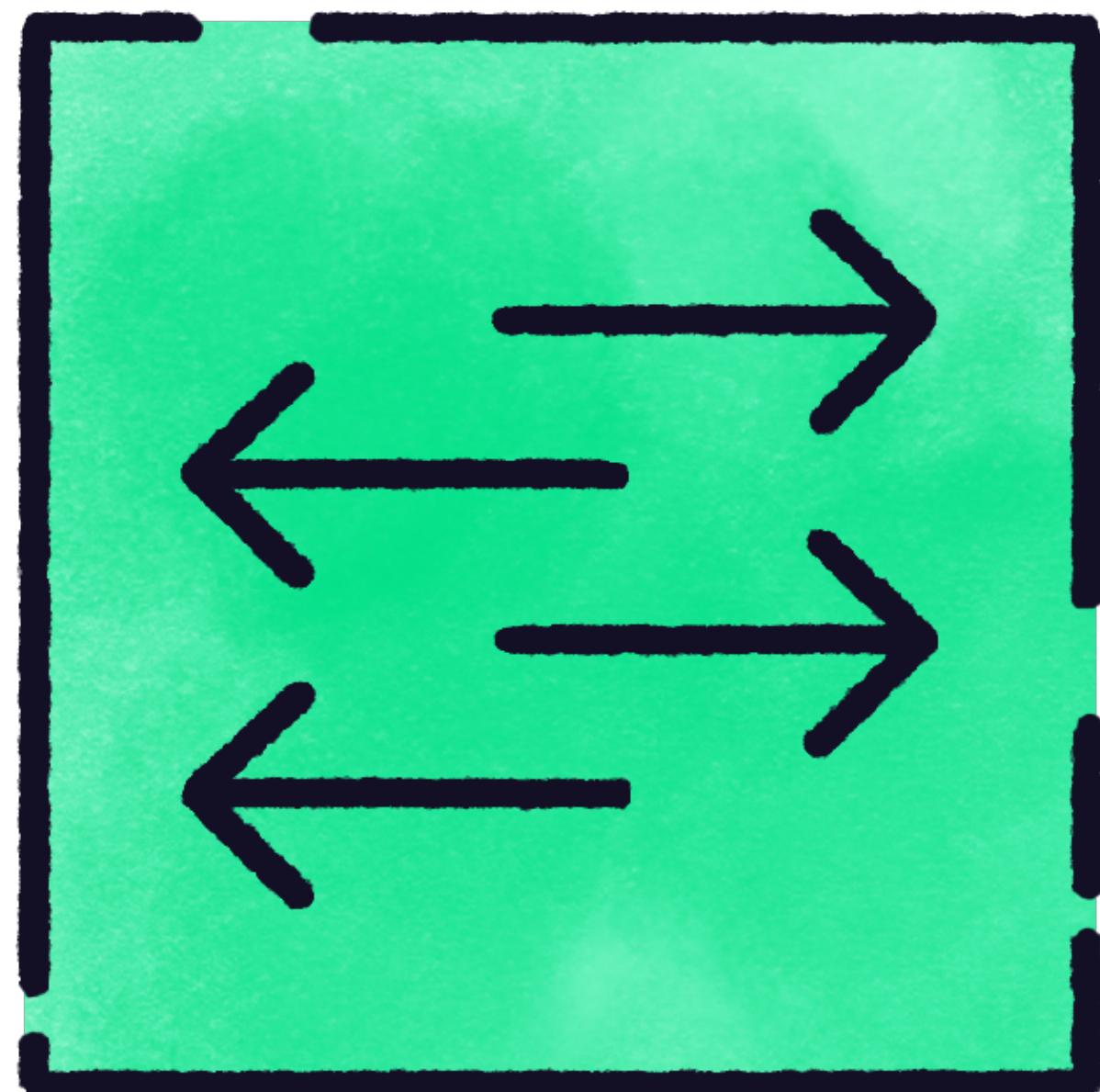
Icons depicting physical objects

Branded icons

LTR language text input



Bidirectionality



Maintains correct text direction for the language

Combines RTL and LTR text direction for mixed content:

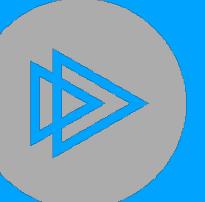
- Number input
- LTR-language words





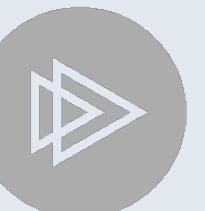
Modern Browsers Support RTL

Follow good web dev practices and use the latest Web APIs available in modern browsers



HTML Elements and Attributes

```
<html dir="rtl | ltr | auto">  
  
<p dir="rtl">Right to left text</p>  
  
:dir(rtl) {  
    /* styles based on directionality defined in document */  
}  
  
[dir=rtl] {  
    /* styles elements with exact attribute matching */  
}  
  
<bdi>Treat text within this element in isolation</bdi>
```

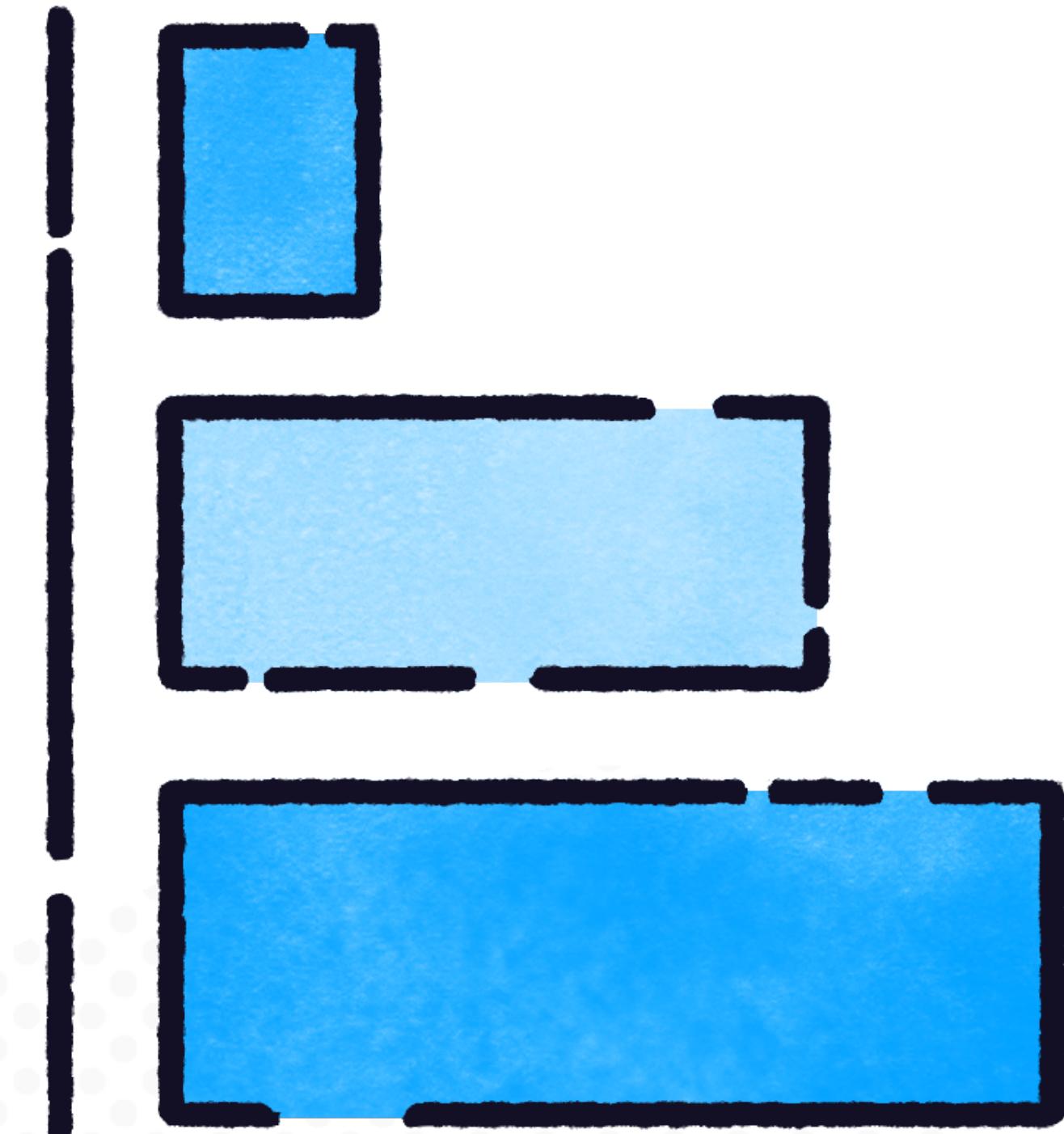


Styles and Layout

Font selection and styles must support RTL languages

Leave extra space for messages

Don't assume direction and flow





CSS Logical Properties and Values

Uses logical direction, not physical direction



Use CSS Logical Properties and Values

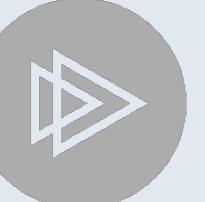
Transition spacing, positioning, and sizing CSS properties from physical to logical

physical.css

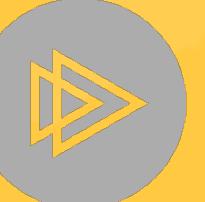
```
.physical {  
  margin-top: 1rem;  
  padding-bottom: 0.5rem;  
  border-right: 2px dotted pink;  
  width: 200px;  
  text-align: left;  
  float: right;  
}
```

logical-properties.css

```
.logical {  
  margin-block-start: 1rem;  
  padding-block-end: 0.5rem;  
  border-inline-end: 2px dotted pink;  
  inline-size: 200px;  
  text-align: start;  
  float: inline-end;  
}
```



**Always test your localized
applications with native
speakers.**



Additional Resources

Material Design Bidirectionality
<https://m2.material.io/design/usability/bidirectionality.html>

Mozilla Developer Network (MDN)
Logical properties

https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_logical_properties_and_values/Basic_concepts_of_logical_properties_and_values

Angular CDK Bidirectionality
<https://material.angular.dev/cdk/bidi/overview>

