



Manuel Matuzović

 @mmatuzo

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ACCESSIBLE UX



@mmatuzo

#WCVIE



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č, č, đ, dž, š, ž, nj, lj

ԛ, ԝ, *x

Accessibility

*The quality of being able to be reached
or entered.*

as defined by the Oxford Dictionary

***Accessibility in web design means
creating web pages that everyone can
use, regardless of hardware, software,
or any sensory or physical impairment.***

Accessibility

*The quality of being easily understood
or appreciated.*

*as defined by the Oxford Dictionary

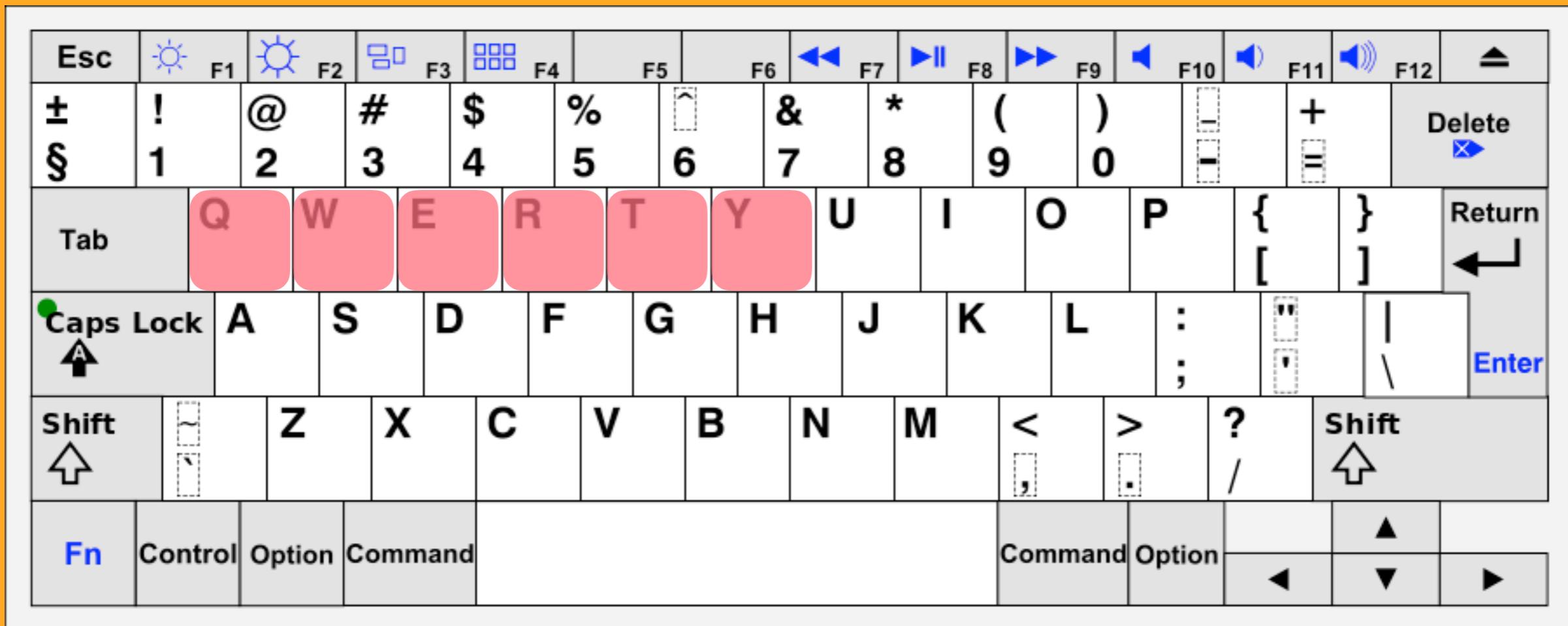
č, č, đ, dž, š, ž, nj, lj

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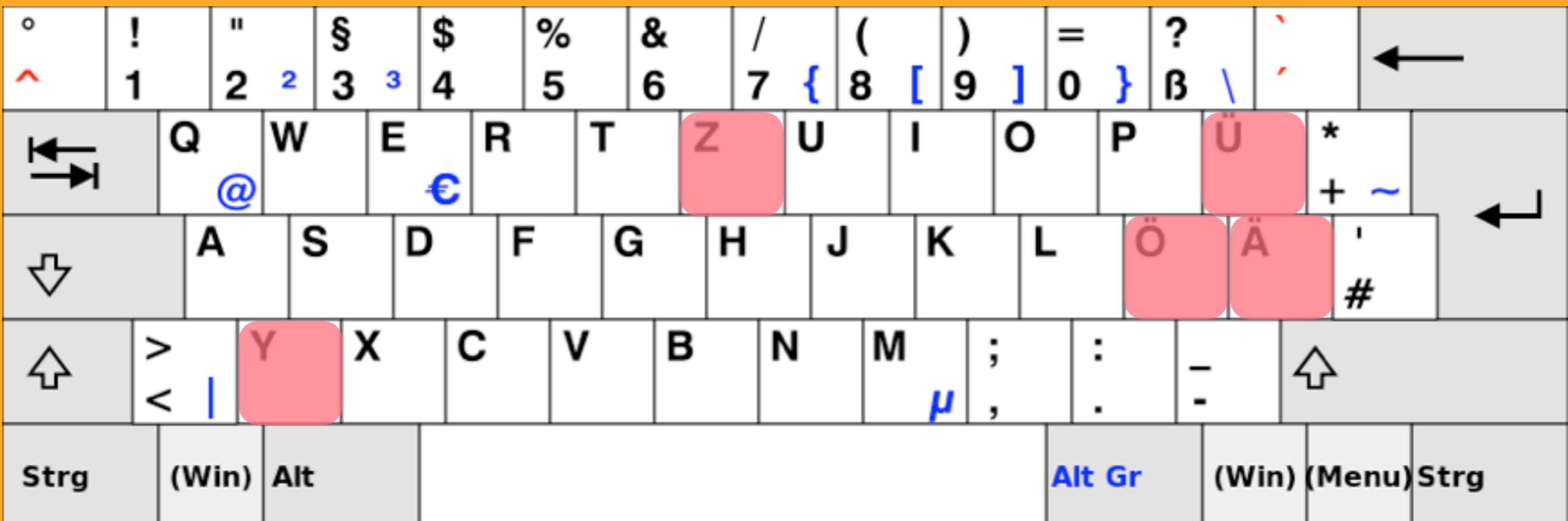
Keyboard layouts

“A keyboard layout is any specific mechanical, visual, or functional arrangement of the keys, legends, or key-meaning associations (respectively) of a computer, typewriter, or other typographic keyboard.”

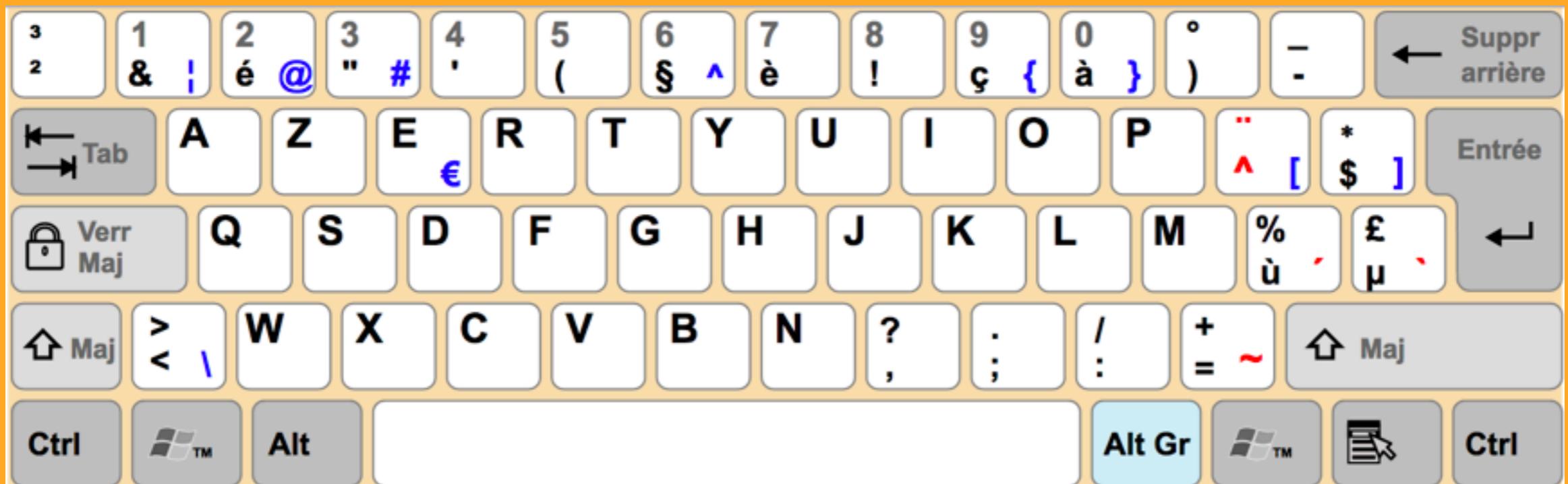
QWERTY



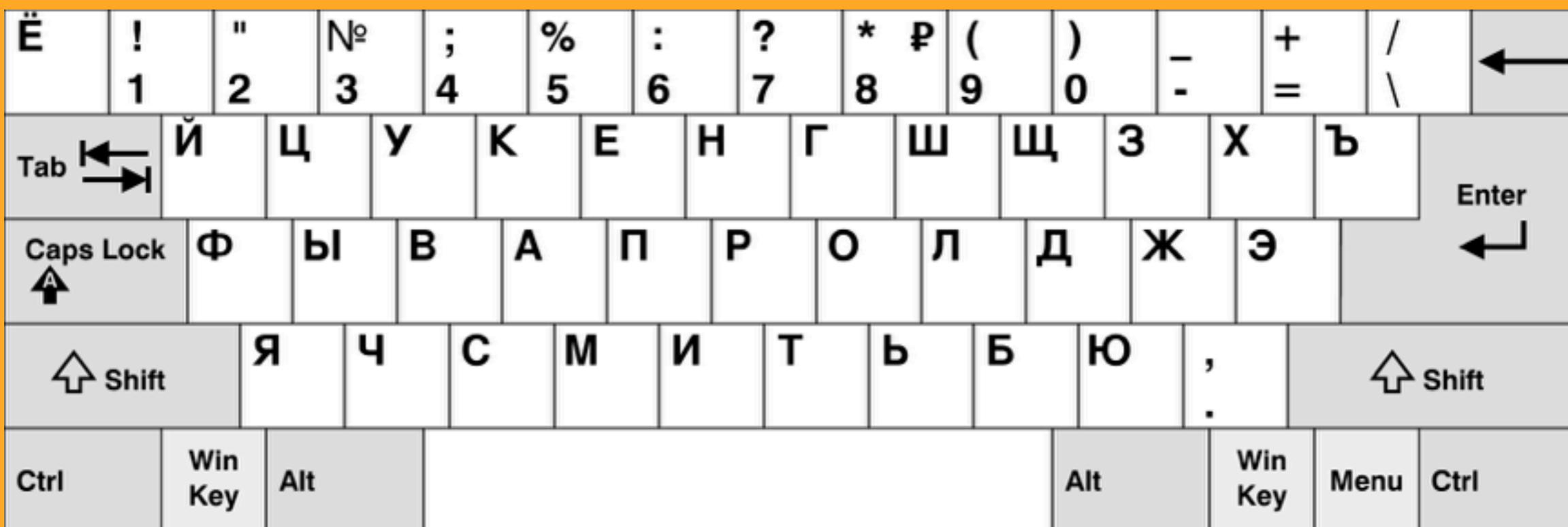
QWERTZ



AZERTY



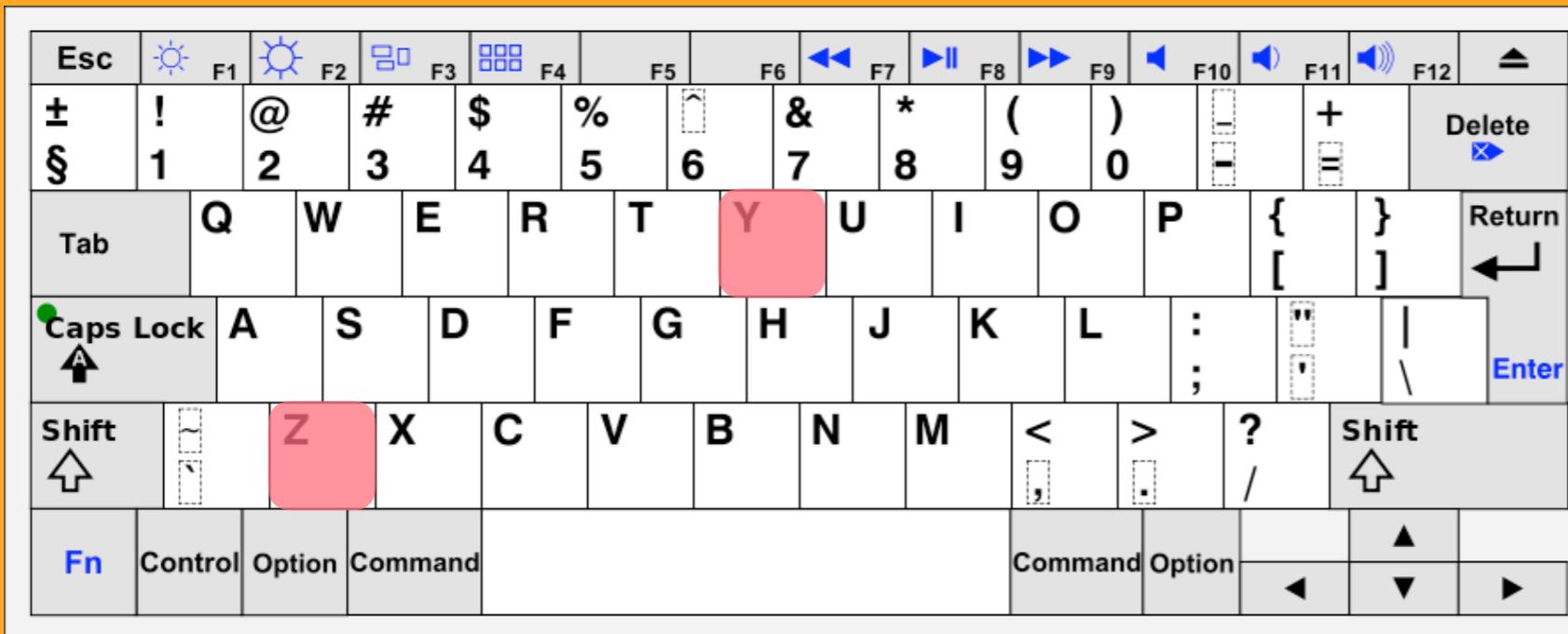
JCUKEN



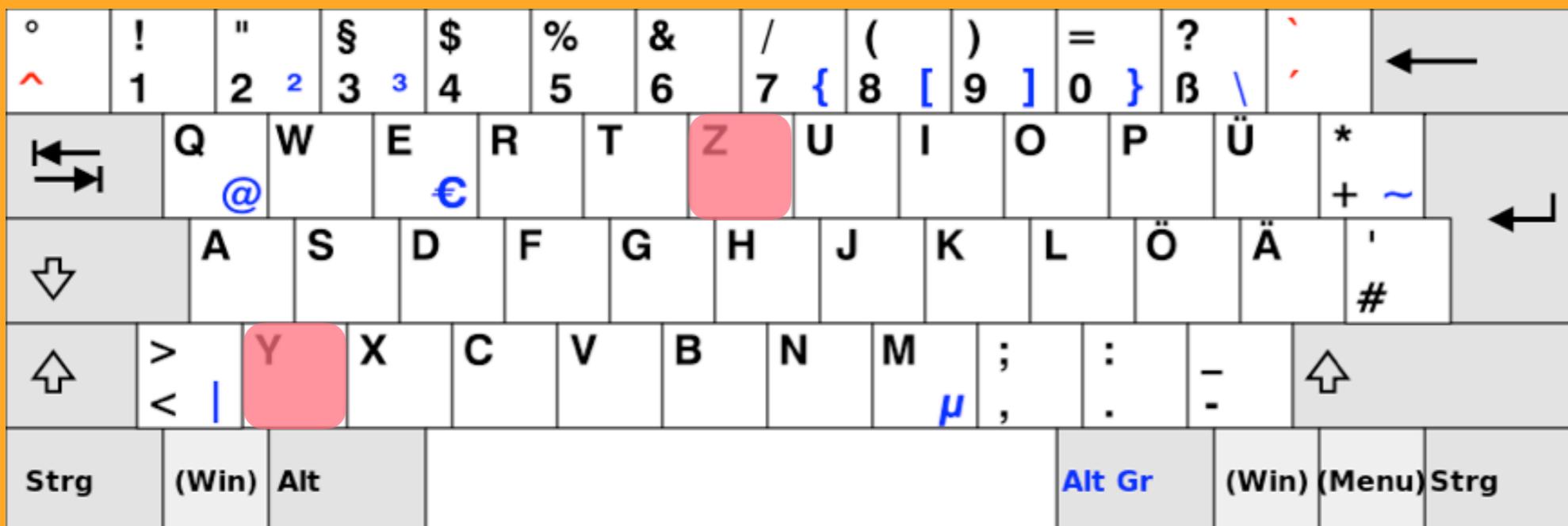
Demo: Keyboard controls



QWERTY



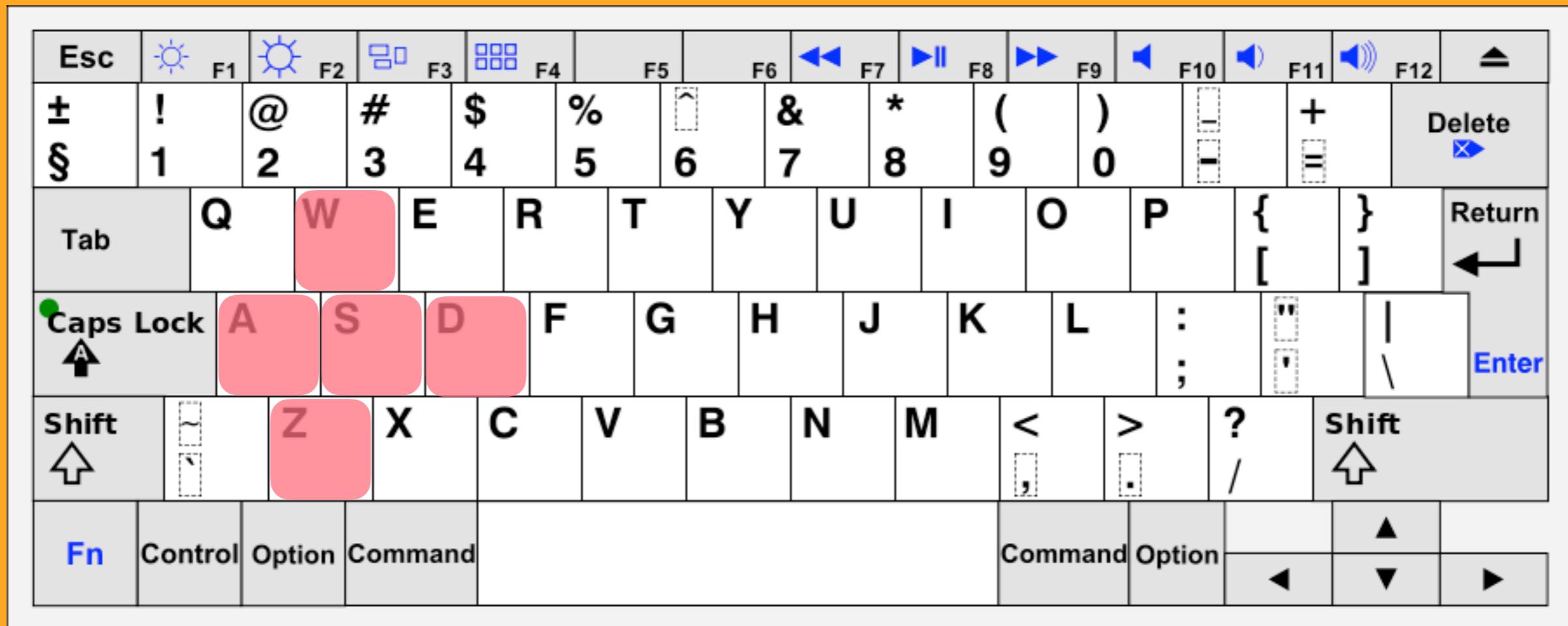
QWERTZ



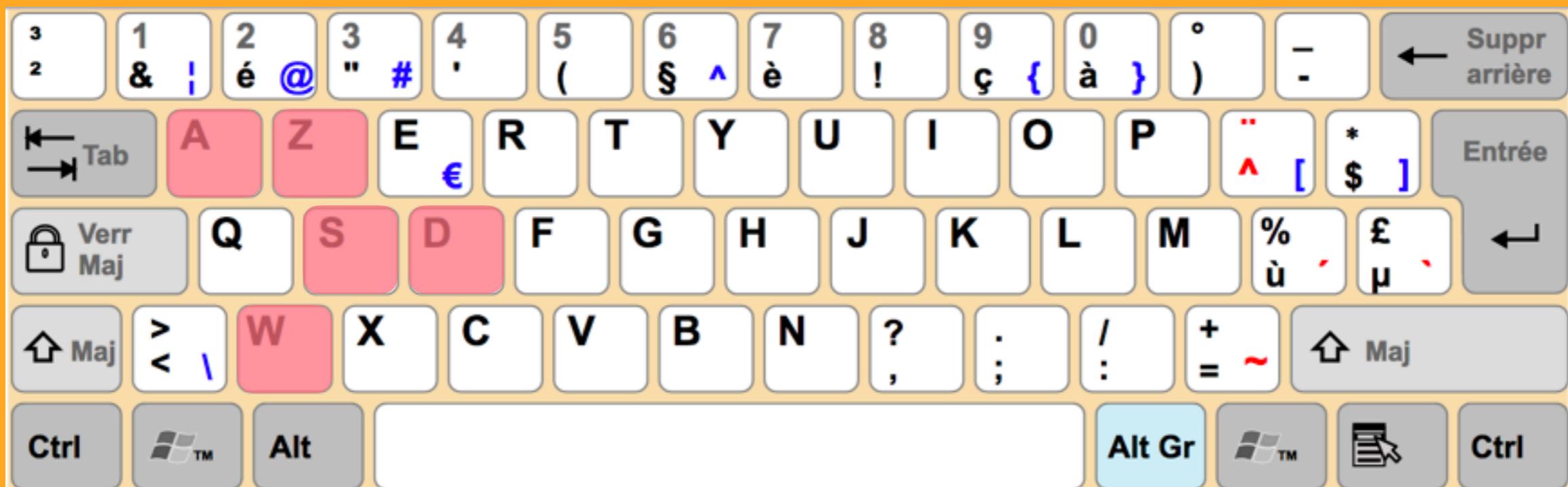
event.keyCode

```
window.addEventListener('keydown', navigate);  
  
function navigate(e) {  
    ...  
  
    if (e.keyCode === 68) {  
        moveLeftAndRight(1);  
    }  
  
    if (e.keyCode === 90) {  
        shootMissile();  
    }  
}
```

QWERTY



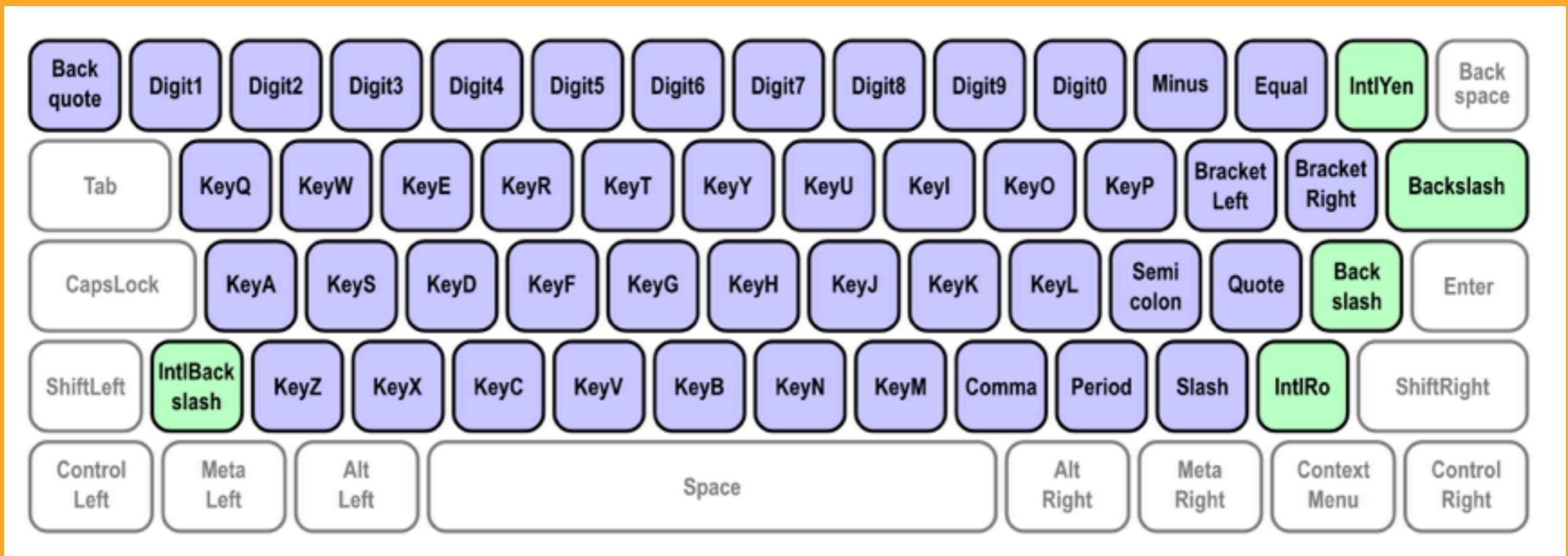
AZERTY



UI Events API

- Two new properties: **key** and **code**
- **event.key** - printable character or a descriptive string, e.g. z
- **event.code** - physical key, e.g. KeyY
- Reference keyboard in the specification

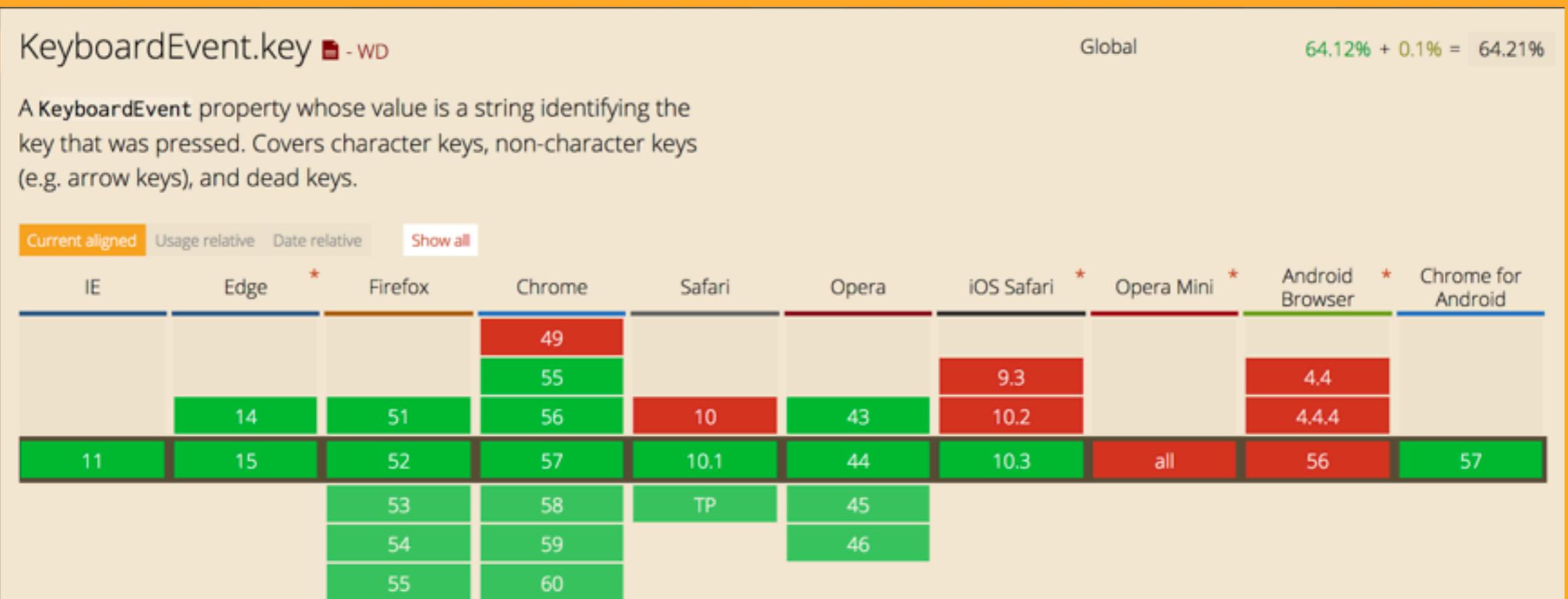
Reference keyboard



event.keyCode

```
window.addEventListener('keydown', navigate);  
  
function navigate(e) {  
    ...  
  
    if (e.code === 'KeyD') {  
        moveLeftAndRight(1);  
    }  
  
    if (e.code === 'KeyY') {  
        shootMissile();  
    }  
}
```

Browsersupport



TWEETABLE TAKE-AWAY

**The web is international and so are
your users.**

**Don't assume that all users use the
same input devices.**

lang attribute

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Document</title>
  </head>
  <body>
  </body>
</html>
```

lang-Attribute impacts

- Assistive Technology
- Translation tools and browsers
- Quote characters
- Date and number inputs
- Search engines
- Hyphenation

lang attribute in WordPress

```
<!DOCTYPE html>
<html <?php language_attributes() ; ?>
class="no-js no-svg">
<head>
    <?php wp_head() ; ?>
</head>
<body>

</body>
</html>
```

TWEETABLE TAKE-AWAY

Make sure to tell the browser the correct language in use. Everyone benefits from it.

Keyboard users



Issues

- Missing or insufficient focus styles
- Off-screen content
- Bad semantics (e.g. button)
- Bad focus management (e.g. modal window)

Possible solutions

- :focus styling
- Setting tabindex
- Knowing and using basic HTML
- Manage focus
- Trap focus

:focus styling

```
a:focus {  
  color: #FF00FF;  
}
```

Hiding content

```
[hidden] {  
  display: none;  
}
```

Setting tabindex

```
<h2 tabindex="0">  
  A focusable heading  
</h2>
```

Semantics matter

```
<!-- DON'T: -->
```

```
<div class="btn">I'm a div</div>
```

```
<div class="btn" tabindex="0">I'm a div</div>
```

```
<div class="btn" tabindex="0"
```

```
role="button">I'm a div</div>
```

```
<!-- DO: -->
```

```
<button>Just use button</button>
```

Remember last focus

```
// Store the last focused element
let lastFocusedElement = document.activeElement;

// Set focus to the modal window
modal.focus();

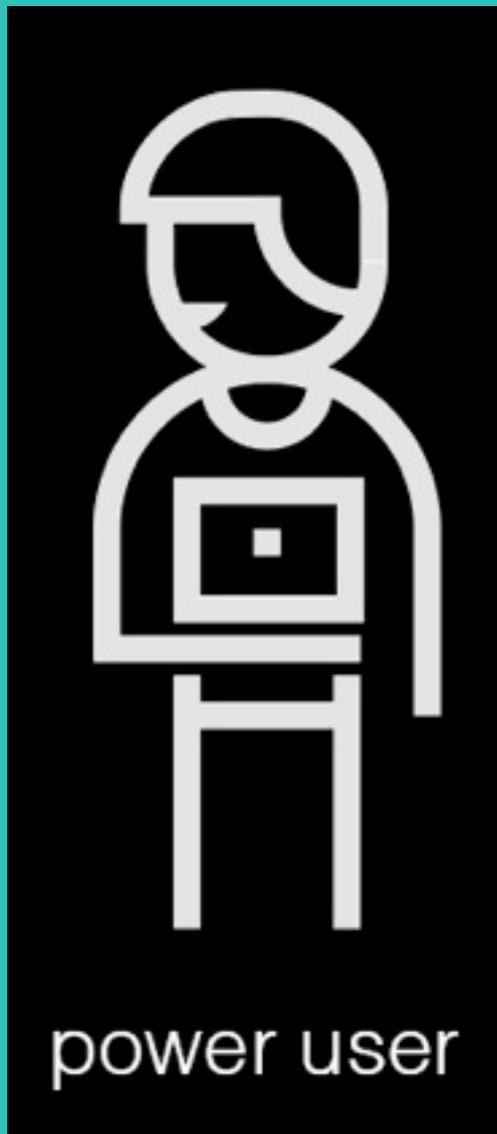
// Close the window by clicking the close button
close.addEventListener('click', removeModal);

function removeModal() {
  // Remove the modal window if it's visible
  modal.classList.remove('is-visible');
  // Return focus to last focused element
  lastFocusedElement.focus();
}
```

Trap focus

```
// If the current element in focus is the first  
focusable element within the modal window...  
  
if (document.activeElement === firstTabStop) {  
  e.preventDefault();  
  
  // ...jump to the last focusable element  
  lastTabStop.focus();  
}  
}
```

Who are we doing this for?



power user



one arm



arm injury



new parent

permanent



situational

TWEETABLE TAKE-AWAY

Assuming that everybody is able to see, hear, say, and touch all the time creates the potential to ignore a lot of users.

TWEETABLE TAKE-AWAY

Make sure to test plugins and JS components for keyboard support before you use them.

The Document Outline (h1-h6)

- Convey document structure
- SEO
- Navigation for screen readers

Navigation via headings

The screenshot shows a Google Chrome browser window with the following details:

- Address Bar:** matuzo.at/demo/headings.html (Not Secure)
- Toolbar:** Shows various tabs and icons, including a magnifying glass icon.
- Content Area:**
 - Fruits**: A section containing placeholder text.
 - Apples**: A section containing placeholder text.
 - Golden delicious**: A section containing placeholder text.
 - Akita Gold**: A section containing placeholder text.
 - Cripps Pink**: A section containing placeholder text.
 - Pink Lady**: A section containing placeholder text.
- Bottom Right Overlay:** A dark rounded rectangle containing the text "Chrome, Apples, window, Apples, HTML content".

The HTML5 document outline is a myth

```
<!-- DON'T DO THAT: -->  
<h1>Heading</h1>
```

```
<section>  
  <h1>Heading</h1>
```

```
<section>  
  <h1>Heading</h1>  
  </section>  
</section>
```

Use properly ranked h-elements

```
<!-- DO THAT: -->
<h1>Heading</h1>

<section>
  <h2>Heading</h2>

  <section>
    <h3>Heading</h3>
  </section>
</section>
```

TWEETABLE TAKE-AWAY

A sound document outline has a huge impact on users and third party software. Get it right!

Navigation via landmarks

```
<header role="banner">  
</header>
```

```
<section>  
  <form role="search"></form>  
</section>
```

```
<aside></aside>
```

```
<footer role="contentinfo"></footer>
```

TWEETABLE TAKE-AWAY

**Take enough time to think about
your document structure and
markup content correctly.**

WordPress and a11y

- Make WordPress Accessible
(<https://make.wordpress.org/accessibility/>)
- Accessibility Handbook
(<https://make.wordpress.org/accessibility/handbook/>)
- Accessibility Theme Review
(<https://make.wordpress.org/themes/handbook/review/accessibility/>)
- Useful Tools
(<https://make.wordpress.org/accessibility/useful-tools/>)
- WP Accessibility Plugin
(<https://wordpress.org/plugins/wp-accessibility/>)

TWEETABLE TAKE-AWAY

**Accessibility is something that
concerns all of us, you and me,
every day. What we create is
useless if it isn't accessible.**



Manuel Matuzović
@mmatuzo

medium.com/@matuzo
codepen.io/matuzo
manuel@matuzo.at

THANK YOU

Images

- Slide4: Daniel Gerersdorfer www.gerersdorfer.net
- Slide5: <https://maps.google.com>
- Slide11: https://en.wikipedia.org/wiki/QWERTZ#/media/File:KB_Germany.svg
- Slide12: [https://en.wikipedia.org/wiki/QWERTY#/media/File:KB_Intl_English_Mac_-_Apple_Keyboard_\(MC184Z\).svg](https://en.wikipedia.org/wiki/QWERTY#/media/File:KB_Intl_English_Mac_-_Apple_Keyboard_(MC184Z).svg)
- Slide13: https://upload.wikimedia.org/wikipedia/commons/4/41/Belgian_pc_keyboard.svg
- Slide14: https://upload.wikimedia.org/wikipedia/commons/6/60/KB_Russian.svg
- Slide21: <https://www.w3.org/TR/uievents-code/#code-value-tables>
- Slide38: https://download.microsoft.com/download/B/0/D/B0D4BF87-09CE-4417-8F28-D60703D672ED/INCLUSIVE_TOOLKIT_MANUAL_FINAL.pdf