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Institute of
Technology
Belgrade

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Responsive Layout

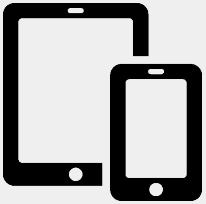
Devices Used for the Web



Screens

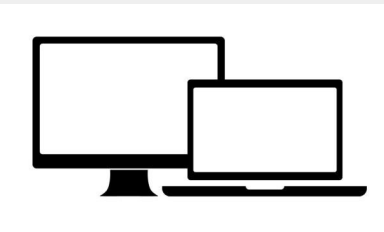
- Screen size

Different visitors of your site will have different sized screens that show different amounts of information

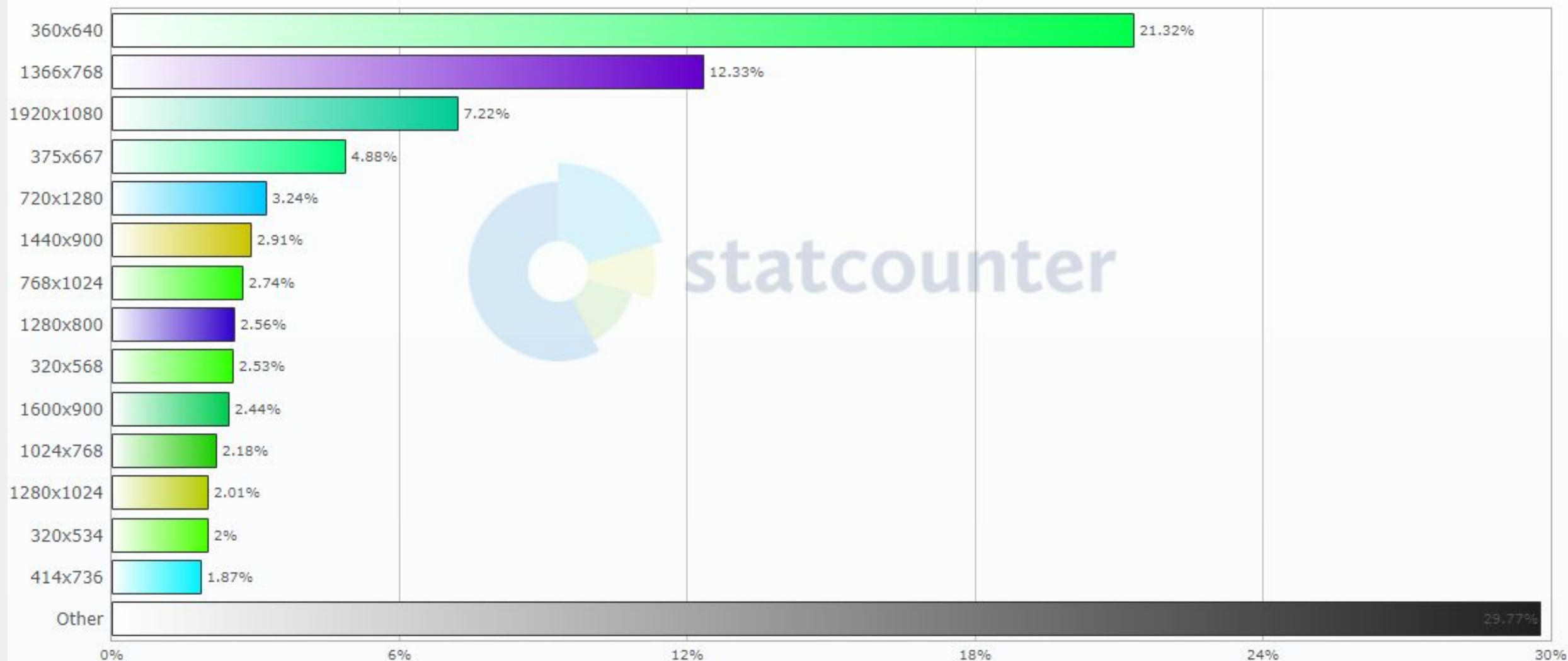


- Resolution

Resolution refers to the number of dots a screen shows per inch. Some devices have a higher resolution than desktop computers and most operating systems allow users to adjust the resolution of their screens



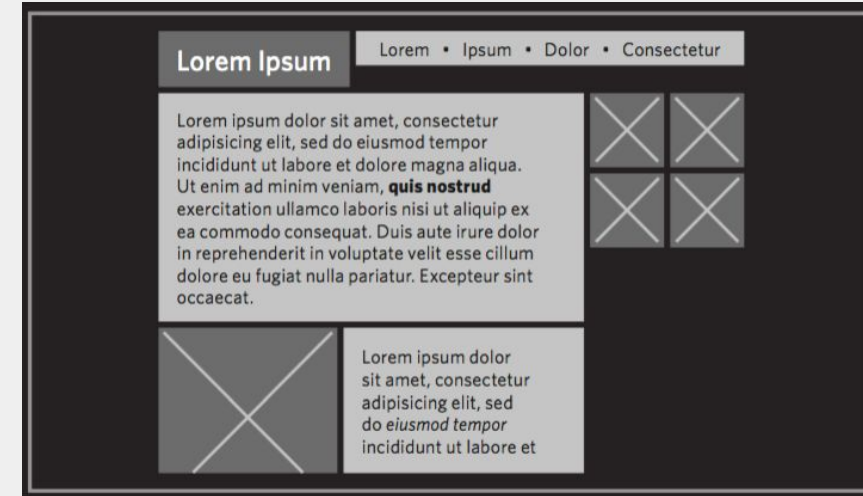
Device Resolutions on Web



Layout Types

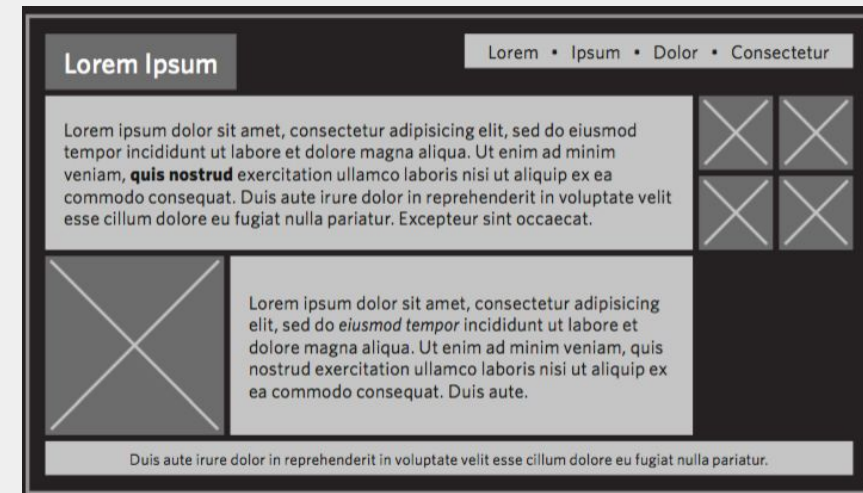
- Fixed-Width Layout

Fixed-width layout designs do not change size as the user increases or decreases the size of their browser window. Measurements tend to be given in pixels



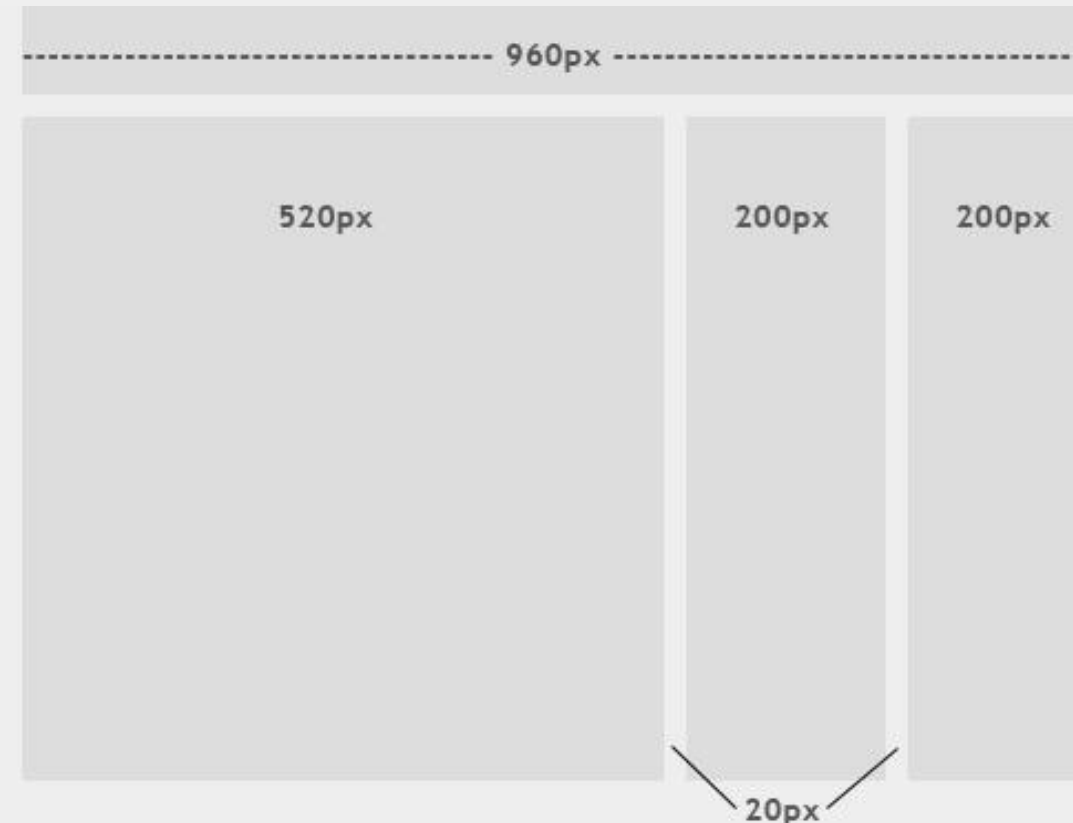
- Liquid Layouts

Liquid layout designs stretch and contract as the user increases or decreases the size of their browser window. They tend to use percentages.

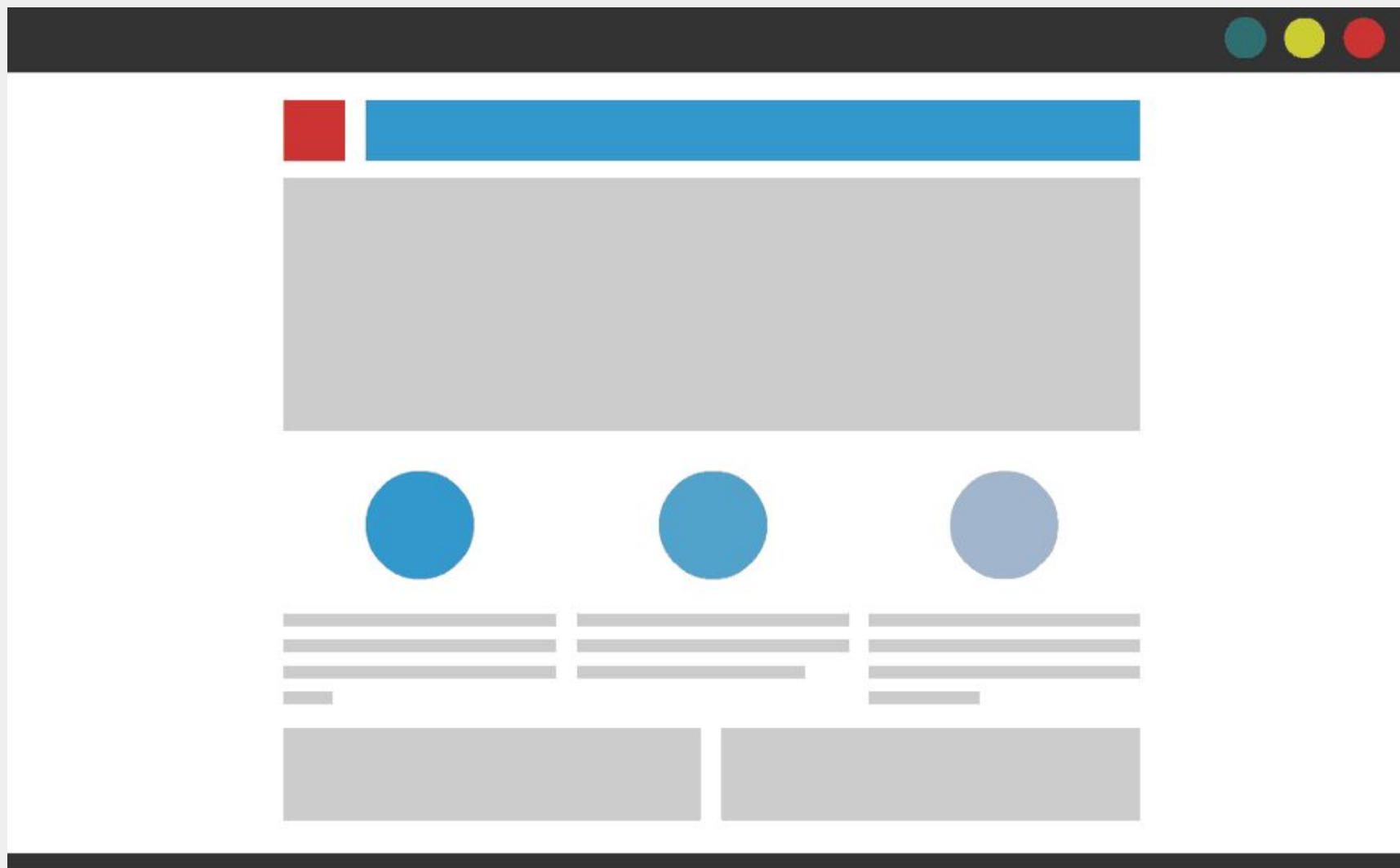


Fixed Width Layout |

- A fixed website layout has a wrapper that is a fixed width
- Components inside it have either percentage widths or fixed widths
- Container (wrapper) element is set to not move
- Same width for all visitors
- Easier to use and easier to customize
- Excessive white space for users with larger screen resolutions
- Smaller screen resolutions may require a horizontal scroll bar

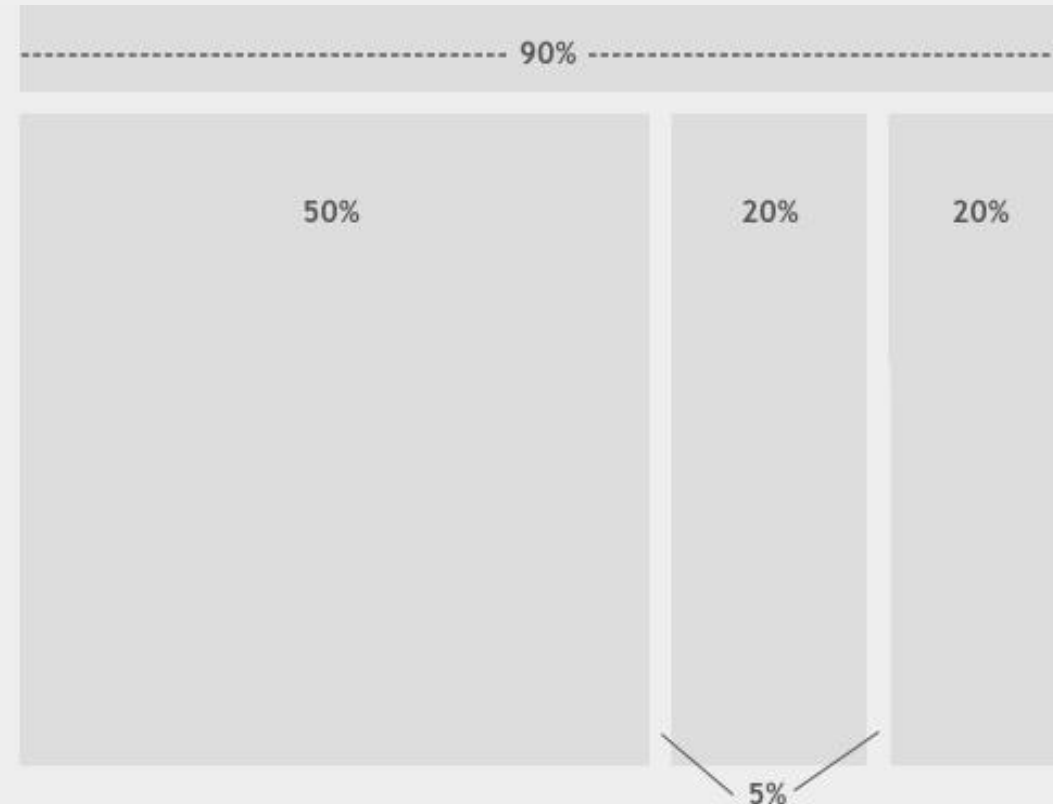


Fixed Width Layout ||



Liquid/Fluid Layouts |

- Majority of the components have widths expressed in percentage
- Component width adjusts to the user's screen resolution
- More user-friendly
- Extra white space is similar between all browsers and screen resolutions
- Less control over what the user sees



Liquid/Fluid Layouts II



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Exercise

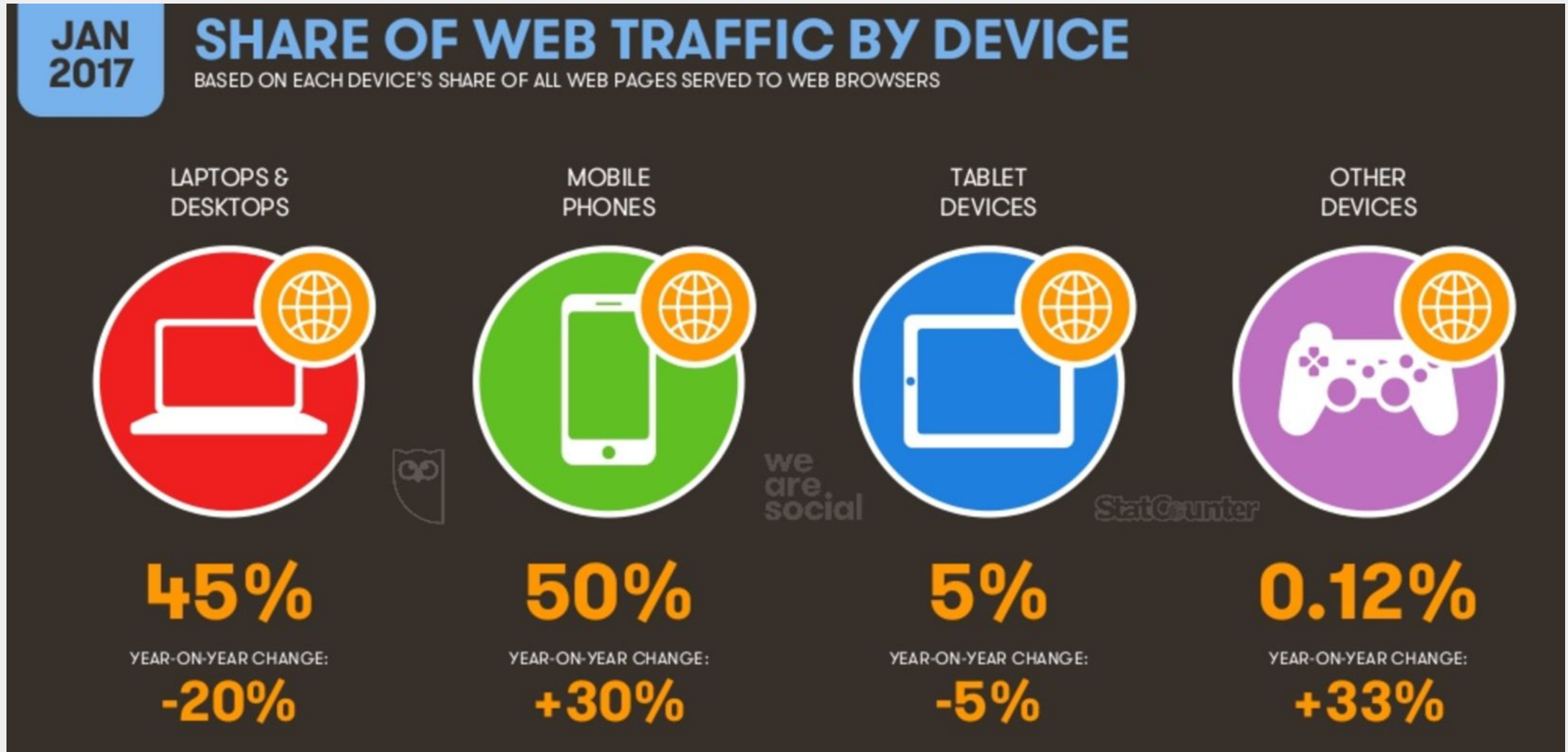
Adaptive Layout |

- There are several versions of the fixed layout design
- Particular layout is displayed based on the screen size of the viewer
- Benefit is that the designer has more certainty that the user will have an optimal experience
- Drawback is that every layout should be designed with care

Adaptive Layout ||



Should You Bother With Mobile Version



Multi-Device Support |

- Multiple sites
 - Desktop
 - Mobile
 - Separated codebases
 - User cannot switch to the desktop version of the site
 - Server needs to decide which version of the site to provide to the user



Multi-Device Support II

- Responsive Design
 - Multiple flexible layouts based on screen resolution
 - Combination of adaptive and fluid layout
- Same codebase (one website)
- Several breakpoints
- Different CSS based on screen resolution



Responsive Design



Responsive Design Strategies

Graceful Degradation



Progressive Enhancement



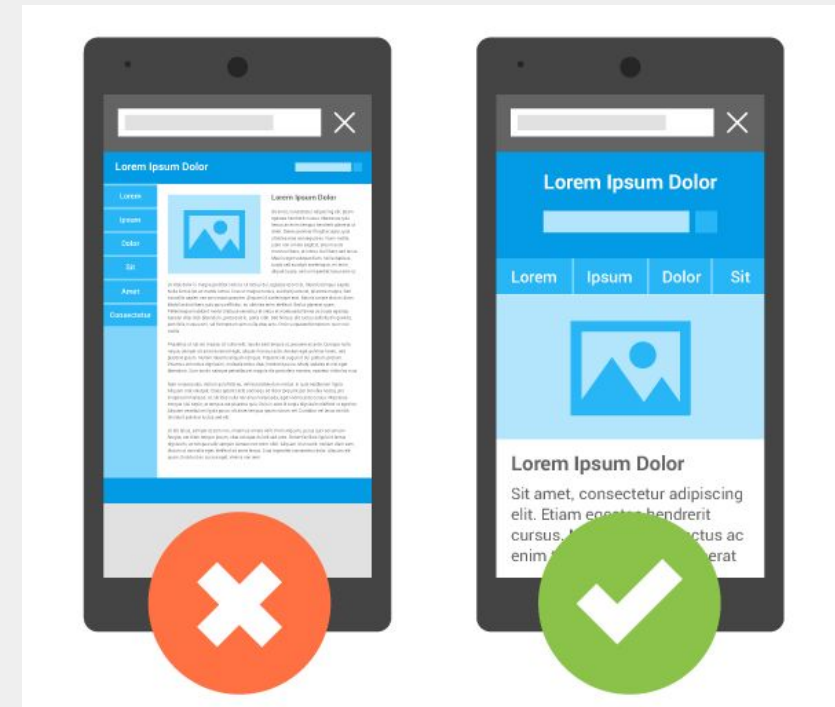
Mobile First Approach

- Progressive enhancement
- Concentrate on mobile version to provide essential information
- When resolution increases, show more content
- “Small to Big” layout transformation is generally easier to implement

Viewport

- User's visible area of a web page
- Smaller on a mobile phone than on a computer screen
- Browsers on smaller devices scale down the entire web page to fit the screen
- Viewport element gives the browser instructions on how to control page dimensions and scaling
- It's defined using a **meta** element placed in the **head** section

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



Media Queries (CSS3)

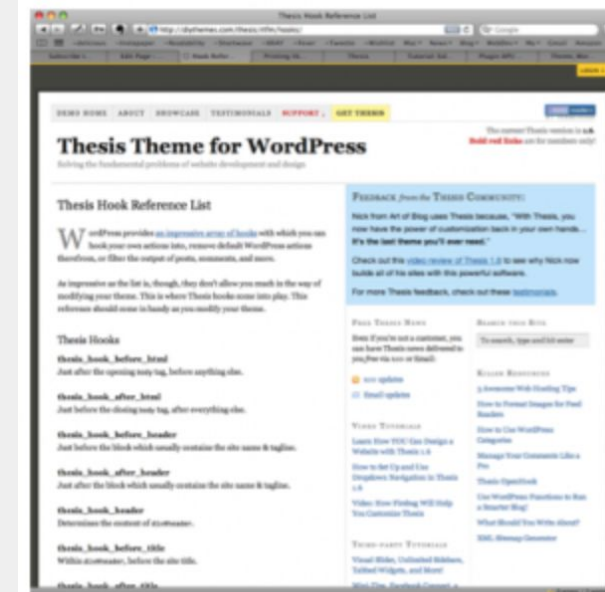
- Media Types
 - CSS2
 - Made it possible to define different style rules for different media types
- Media Queries
 - Extend the CSS2 media types idea
 - Look at the capability of the device
- Both Media Types and Media Queries are evaluated by browser and when true, browser applies the style defined for that media

Media Types

- Describe the general category of a device
- Supported types
 - **all** – all devices
 - **print** – print preview and paged media
 - **screen** – color screens
 - **speech** – speech synthesizers

```
@media print {
  footer {
    color: white;
  }
}
```

```
<link rel="stylesheet" href="main.css">
<link rel="stylesheet" href="print.css" media="print">
```



Engage:

- Demo Blog
- About
- Knowledge
- Testimonials
- Support
- Get Themes

The current Thesis version is 1.6.

Build and links are for members only!

[Thesis Theme for WordPress](#)

Solving the fundamental problems of website development and design

Thesis Hook Reference List

WordPress provides an *impressive array of hooks* with which you can hook your own actions into, remove default WordPress actions (functions), or filter the output of posts, comments, and more.

As impressive as the list is, though, they don't allow you much in the way of modifying your theme. This is where Thesis hooks come into play. This reference should come in handy as you modify your theme.

Thesis Hooks

thesis_hook_before_html
Just after the opening body tag, before anything else.

thesis_hook_after_html
Just before the closing body tag, after everything else.

thesis_hook_before_header
Just before the block which usually contains the site name & tagline.

thesis_hook_after_header
Just after the block which usually contains the site name & tagline.

thesis_hook_before_title
Determines the content of <title>.

thesis_hook_after_title
Within <title>, before the site title.

thesis_hook_before_title
Within <title>, after the site title.

thesis_hook_after_title
Within the tag name, just after <title> <name>="name".

Media Queries

- Used for checking
 - width and height of the viewport
 - width and height of the device
 - orientation
 - resolution
 - aspect-ratio
 - ...
- Defines breakpoints

```
@media only screen and (max-width: 500px) {  
  /* CSS-Code; */  
}
```

```
<link rel="stylesheet" href="style.css" media="screen and (min-width: 960px)">
```

Responsive Breakpoints I

// Extra small devices (portrait phones, less than 576px)

// No media query since this is the mobile first design

// Small devices (landscape phones, 576px and up)

@media (min-width: 576px) { ... }

// Medium devices (tablets, 768px and up)

@media (min-width: 768px) { ... }

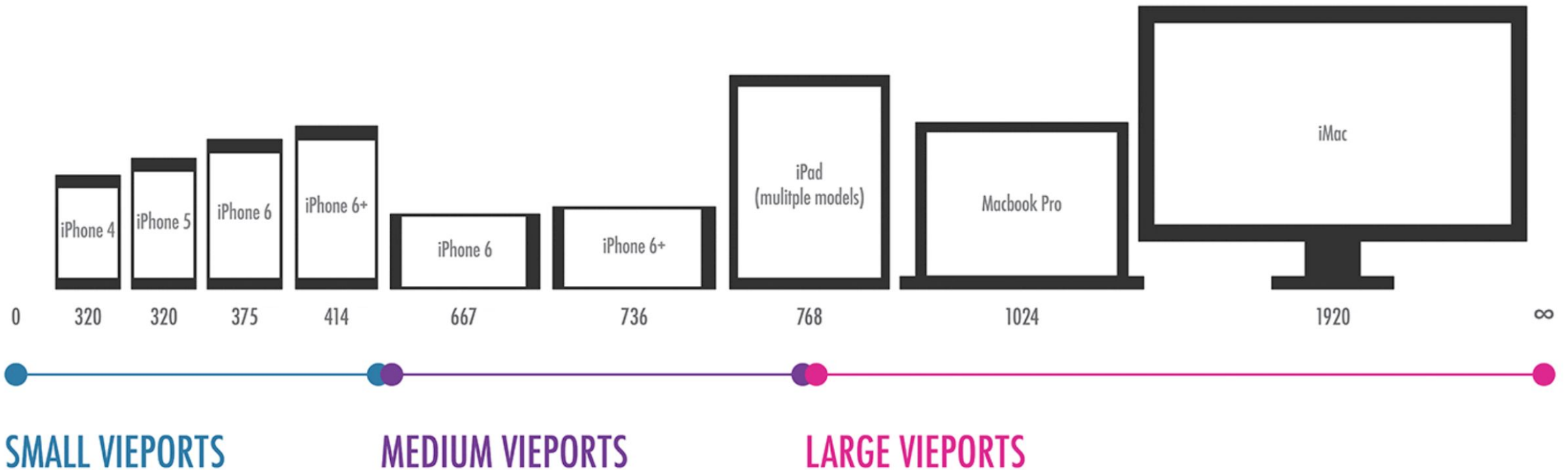
// Large devices (desktops, 992px and up)

@media (min-width: 992px) { ... }

// Extra large devices (large desktops, 1200px and up)

@media (min-width: 1200px) { ... }

Responsive Breakpoints II



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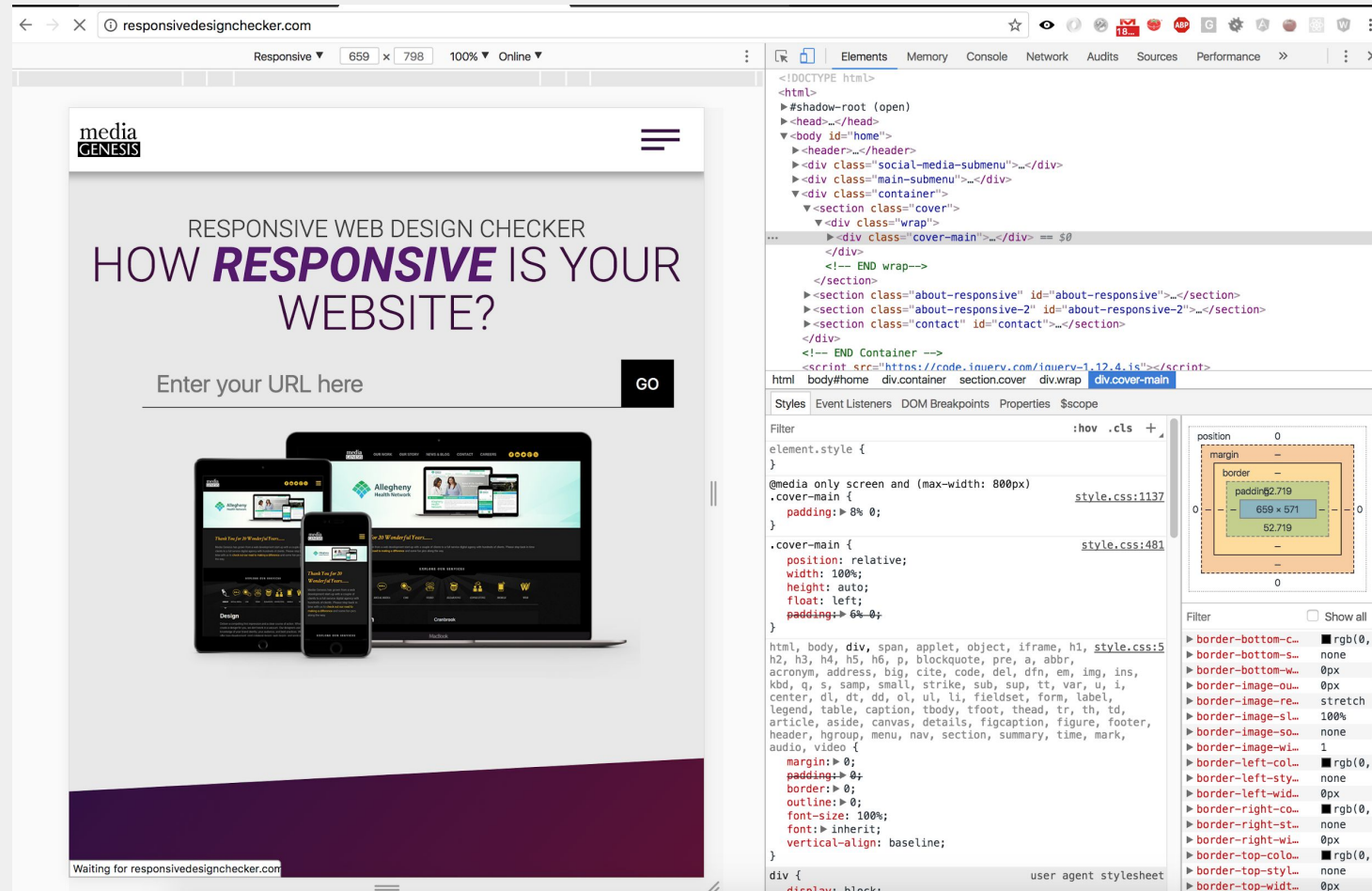
DEMO

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Exercise

Check Responsive Design

- Chrome Developer Tools



Check Responsive Design II

- Resources online
 - <http://responsivedesignchecker.com/>
 - <http://mattkersley.com/responsive/>



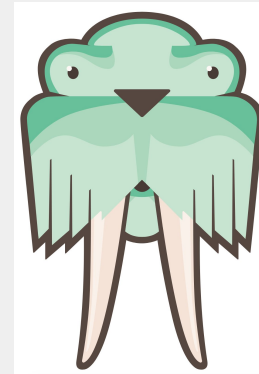
Static Site Deploy In Develop

- Share progress
- Ask for feedback
- Fast deploy from command line

Aerobatic



Surge



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References

- Google Mobile First Indexing: <https://goo.gl/6qcpi1>
- Mobile Friendly Test: <https://goo.gl/CYiAE3>
- Screen Resolutions Worldwide: <https://goo.gl/BvXM3A>
- Media Queries: <https://goo.gl/4qyAyg>
- Responsive Demo: <https://goo.gl/1RrQBM>
- Responsive Design Checker: <http://responsivedesignchecker.com/>
- Deploy Static Website:
 - <https://www.aerobatic.com/>
 - <https://surge.sh/>

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