

# Responsive Web Design

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A mobile-first approach to creating beautiful websites

# Objectives

1

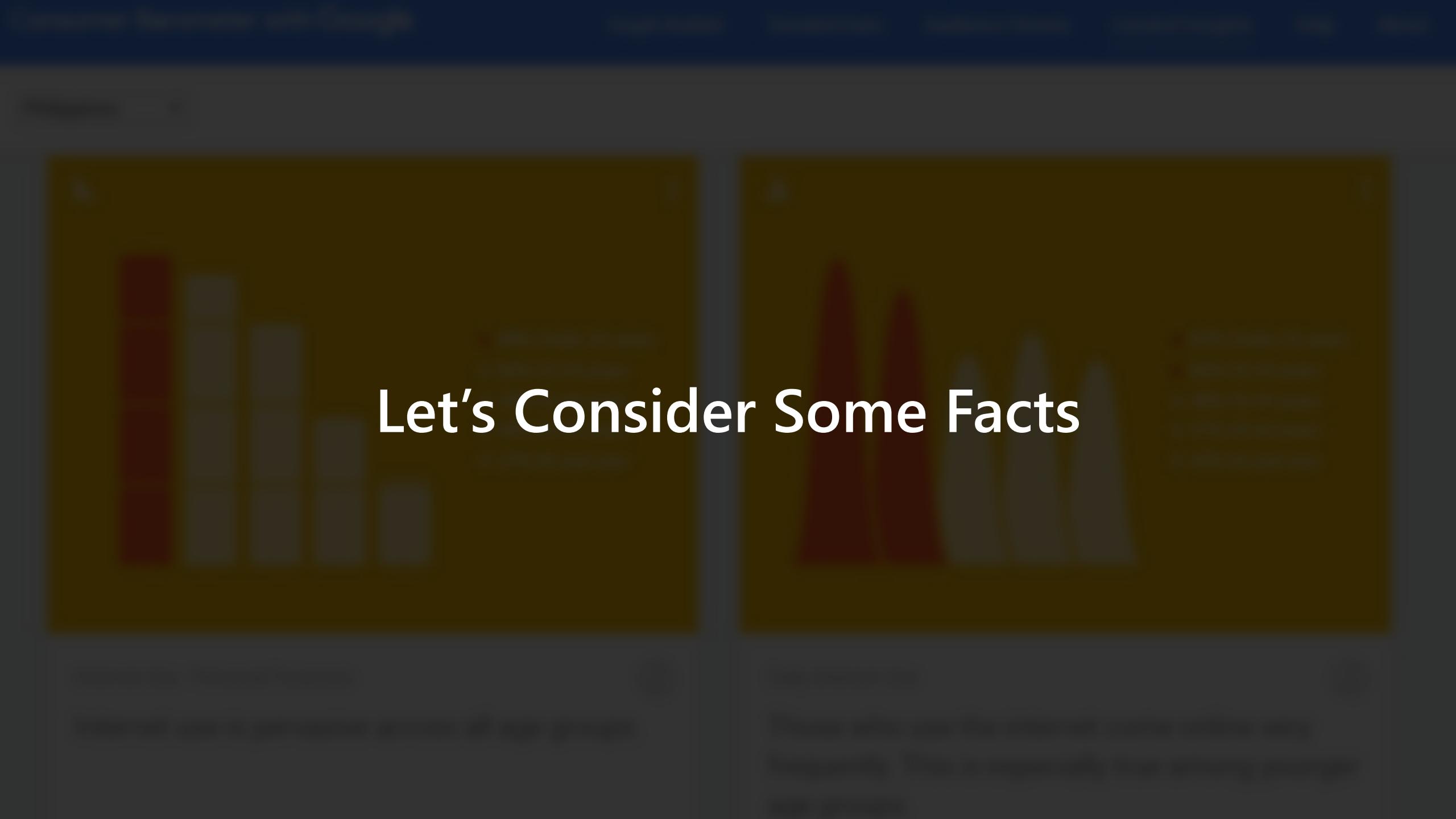
Appreciate a mobile-first approach to web design

2

Understand the principles of Responsive Web Design

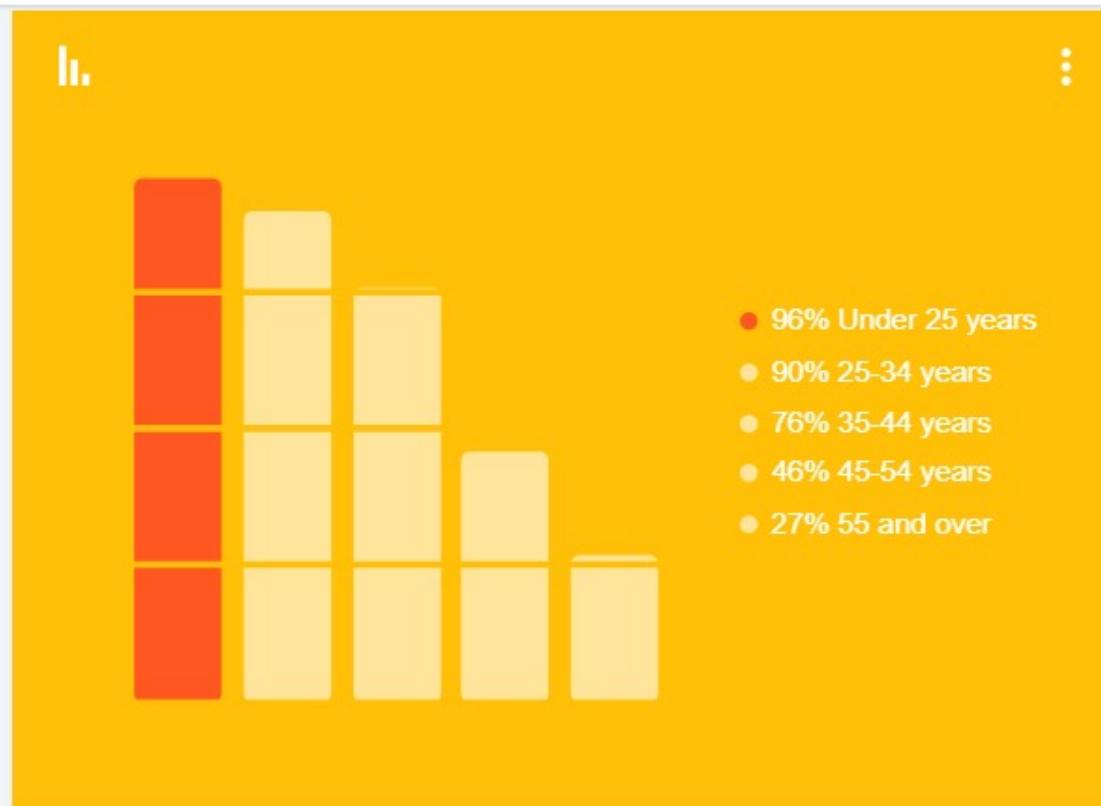
3

Apply code needed for pages to be ready for mobile



Let's Consider Some Facts

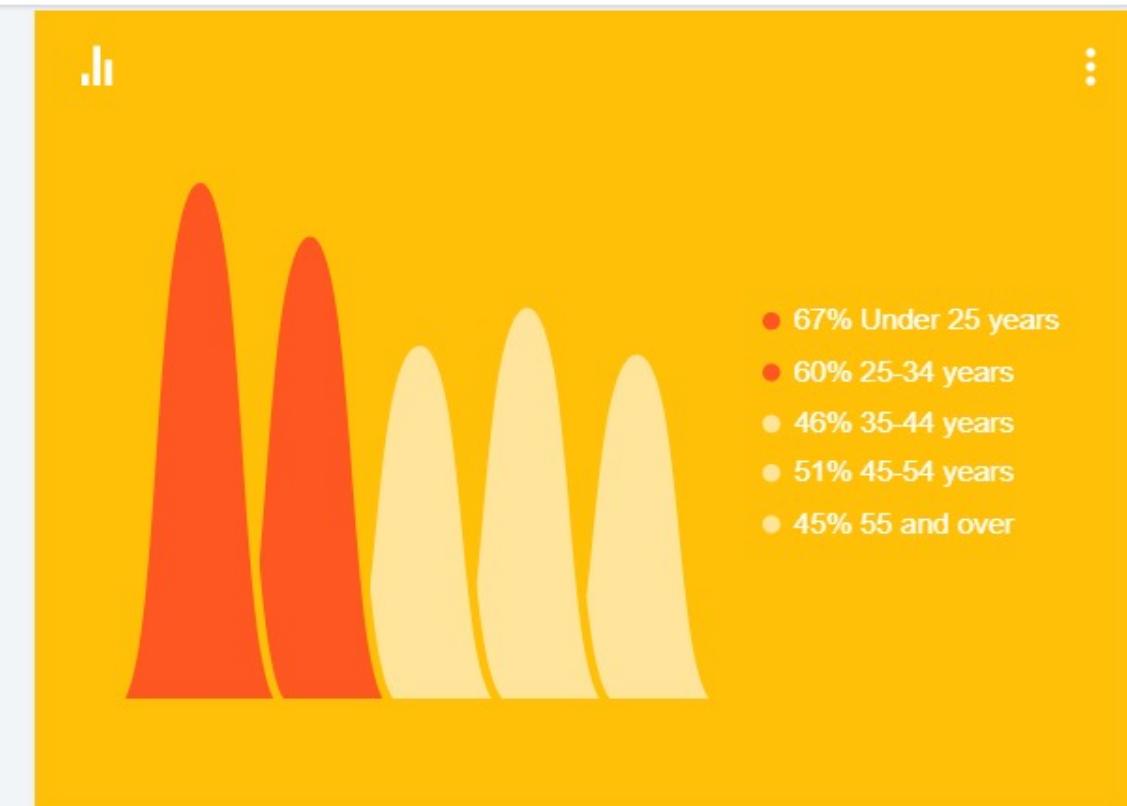
Philippines ▾



Internet Use - Personal Purposes



Internet use is pervasive across all age groups.

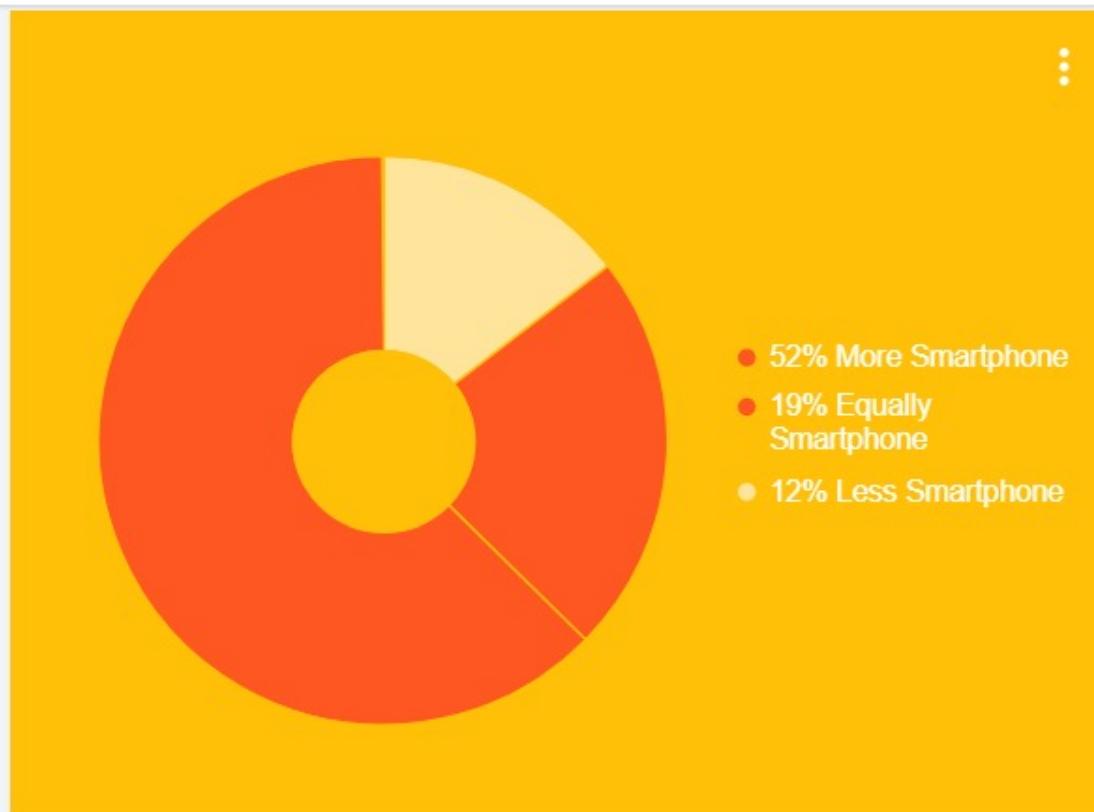


Daily Internet Use



Those who use the internet come online very frequently. This is especially true among younger age groups.

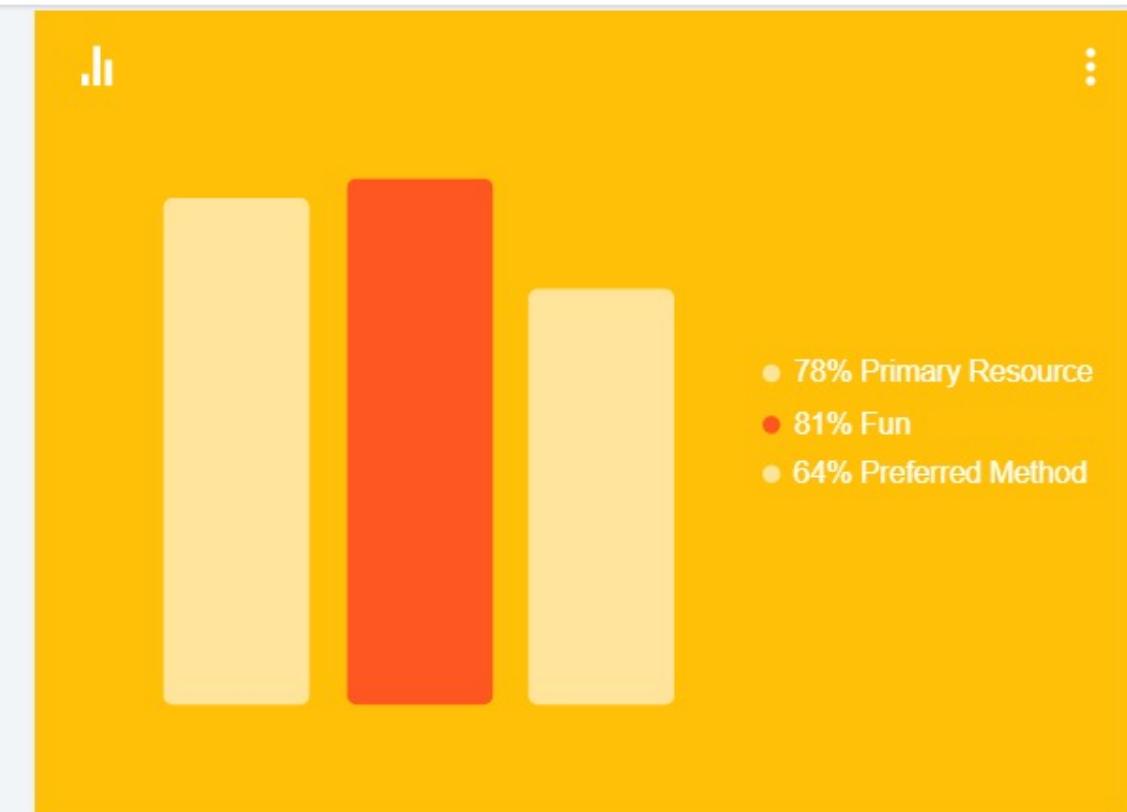
Philippines ▾



## Devices Most Often Used to Come Online



For many people, Internet access is smartphone-centric. Smartphones are used to come online at least as often as computers / tablets.

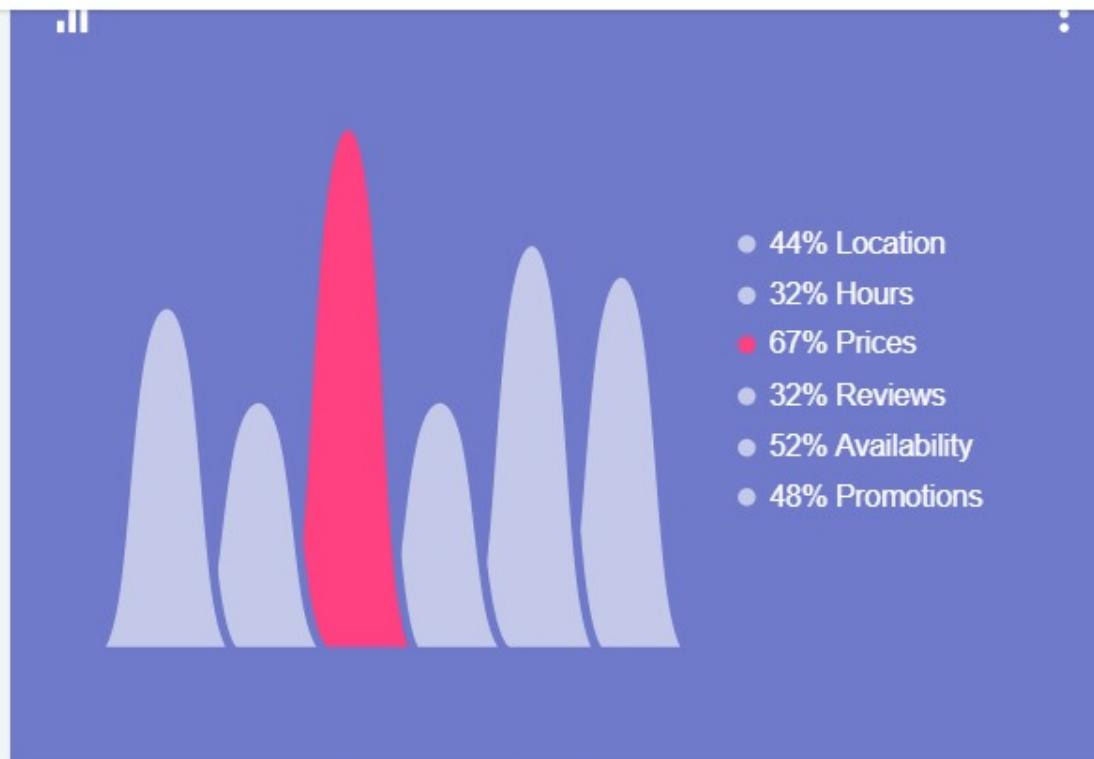


## Agreement with the Statements: "The Internet is..."



Once online, the Internet becomes essential for many people.

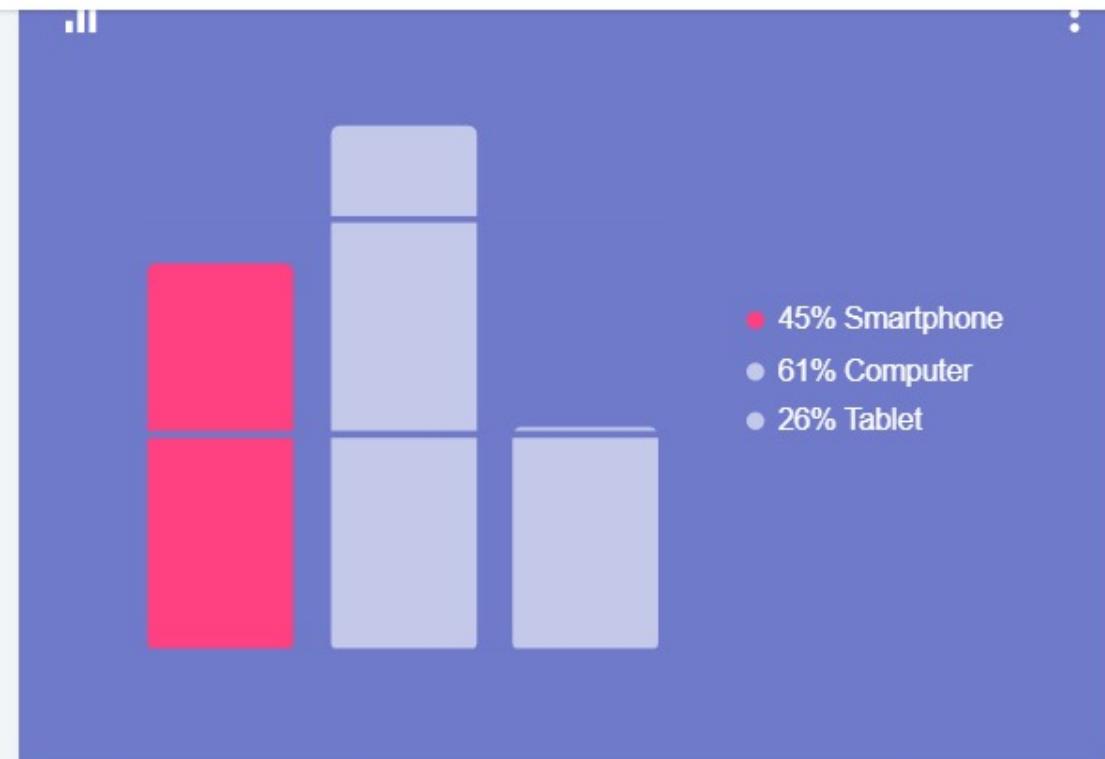
Philippines ▾



## Type of Local Business Information Needed



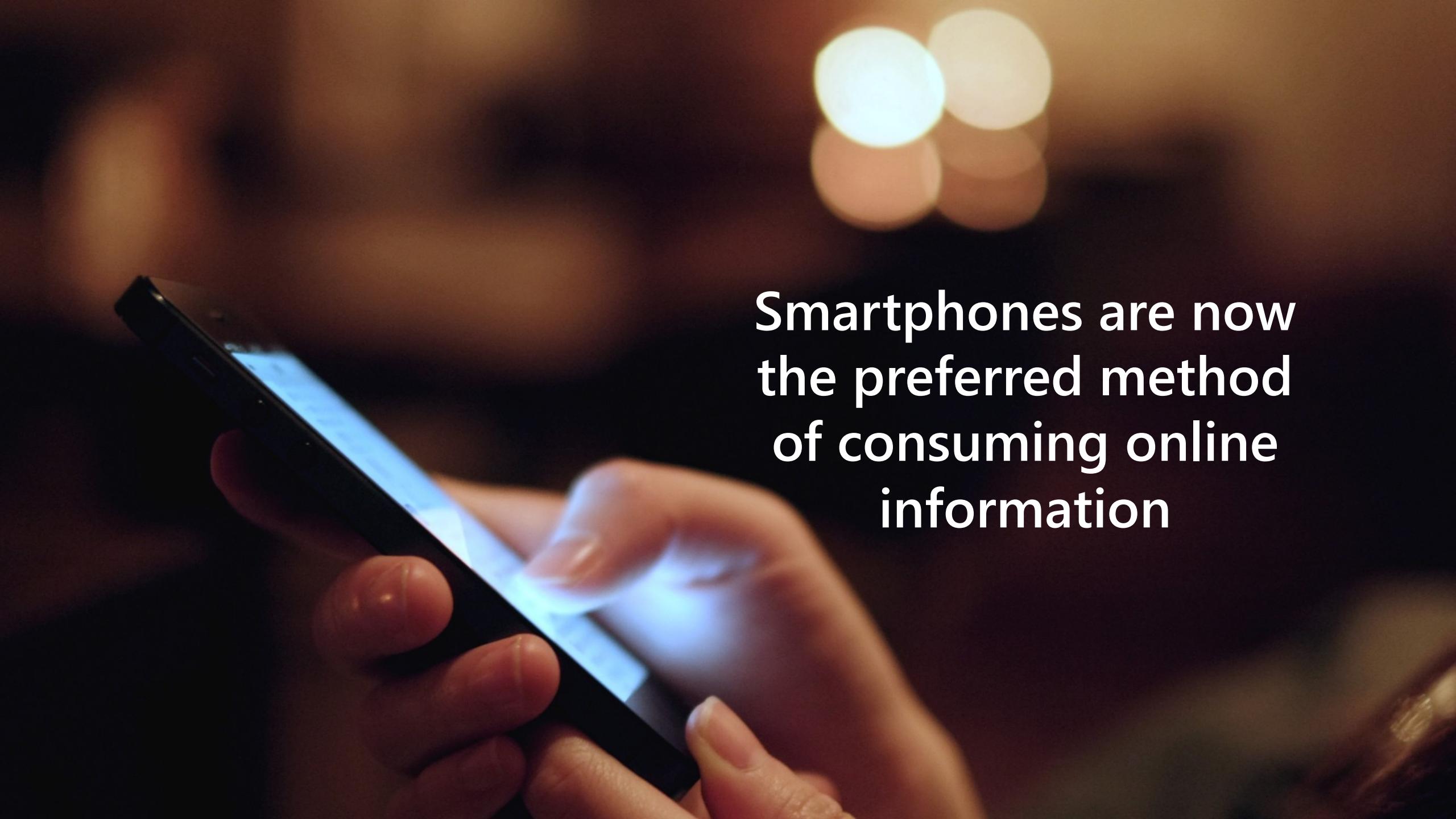
By understanding what consumers look for, businesses are able to ensure the right information is available on their websites.



## Devices Used for Local Search



People look for local information across different devices, including smartphones, so it's crucial for businesses to ensure that their site is suitably optimized.

A close-up photograph of a person's hands holding a smartphone. The phone is held horizontally, with the screen illuminated and showing some content. The background is dark and out of focus, with several bright, circular bokeh lights visible.

Smartphones are now  
the preferred method  
of consuming online  
information



YouTube PH

Search



Home



Trending



Subscriptions

## LIBRARY



History



Watch later



Computer Sc - D...



Liked videos

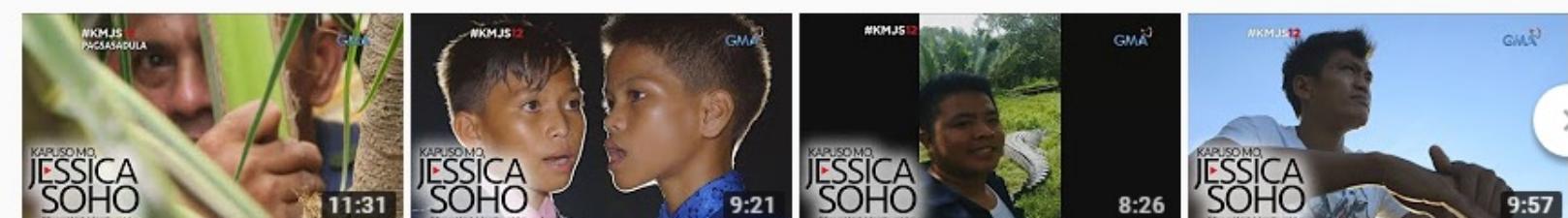


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## SUBSCRIPTIONS



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87



4096

2



Adobe



Adobe Photoshop



Adobe Students

Kapuso Mo, Jessica Soho: Lalaking tatlong taong

GMA Public Affairs ✓  
342K views • 12 hours ago

Kapuso Mo, Jessica Soho: Air Supply Brothers, kilalanin!

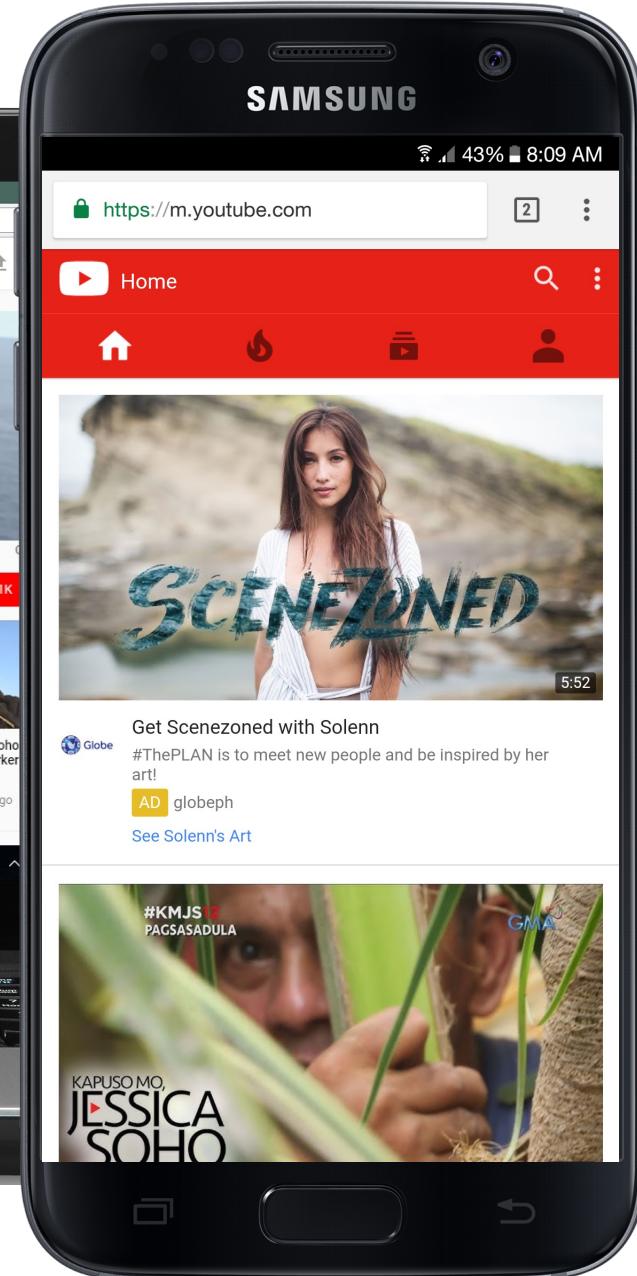
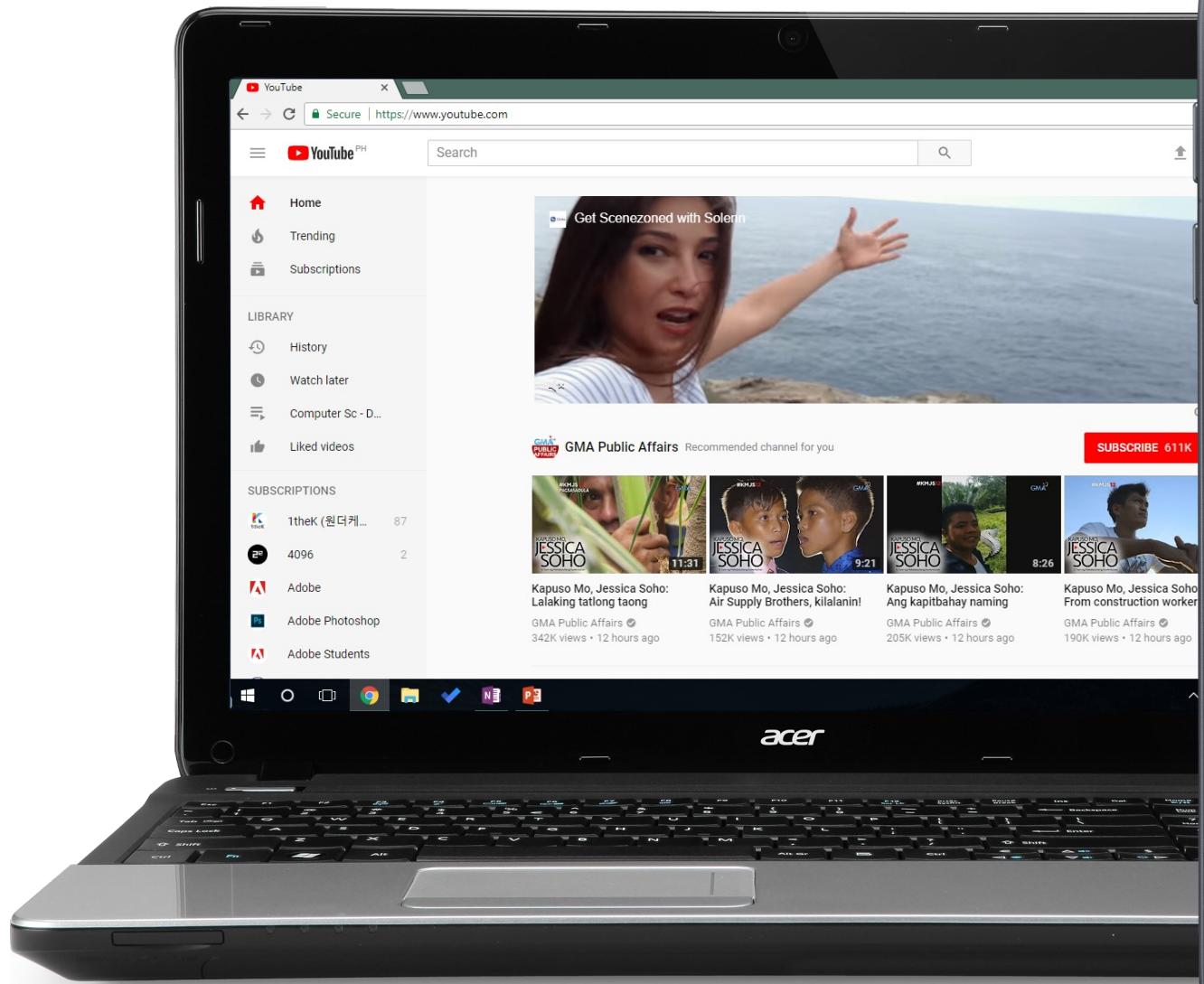
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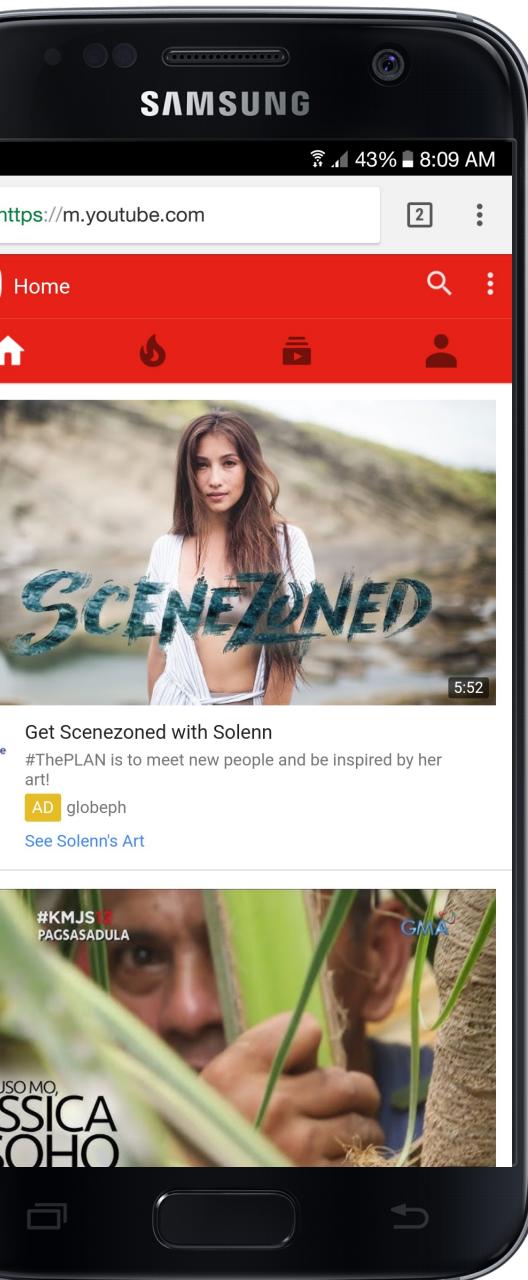
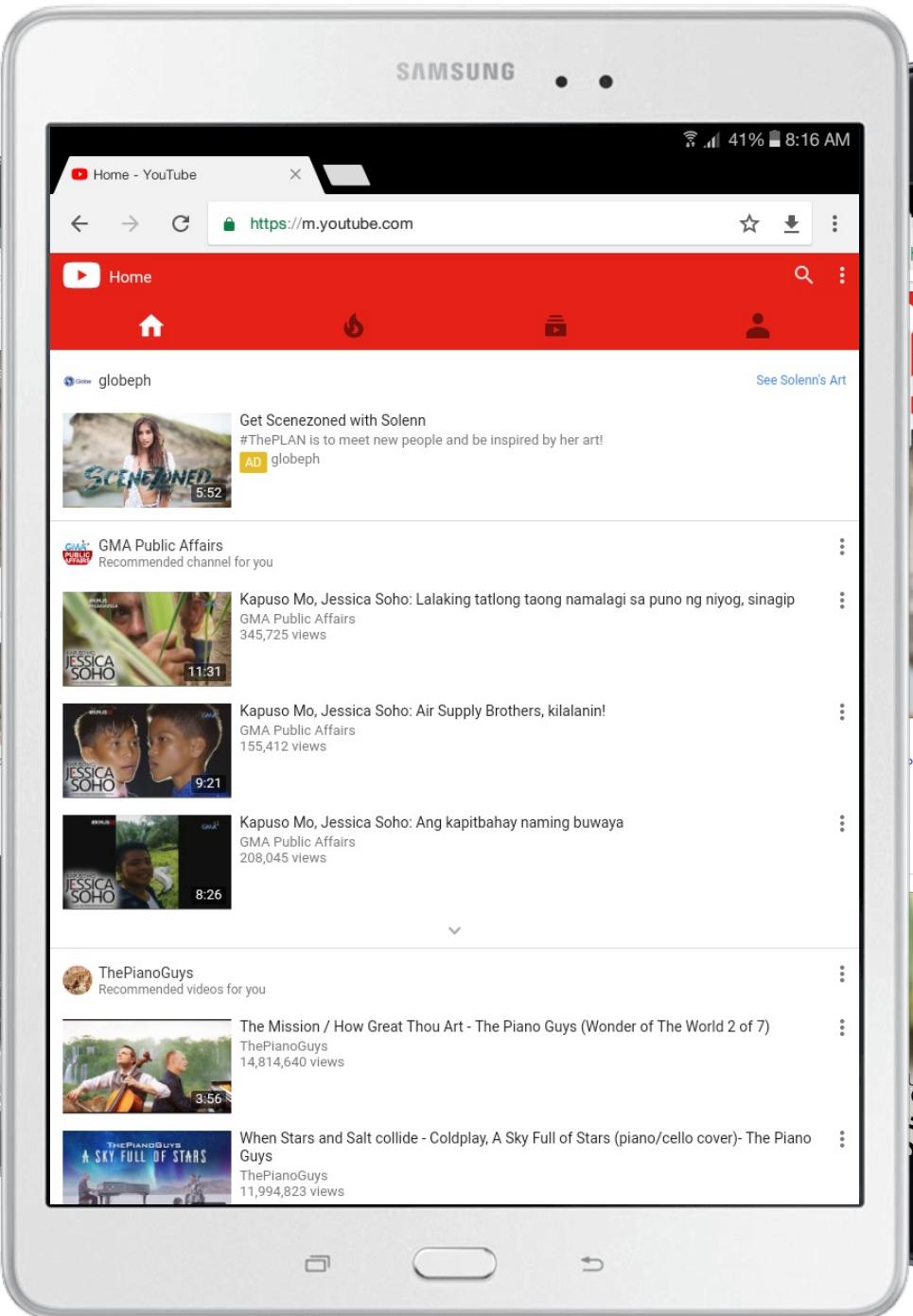
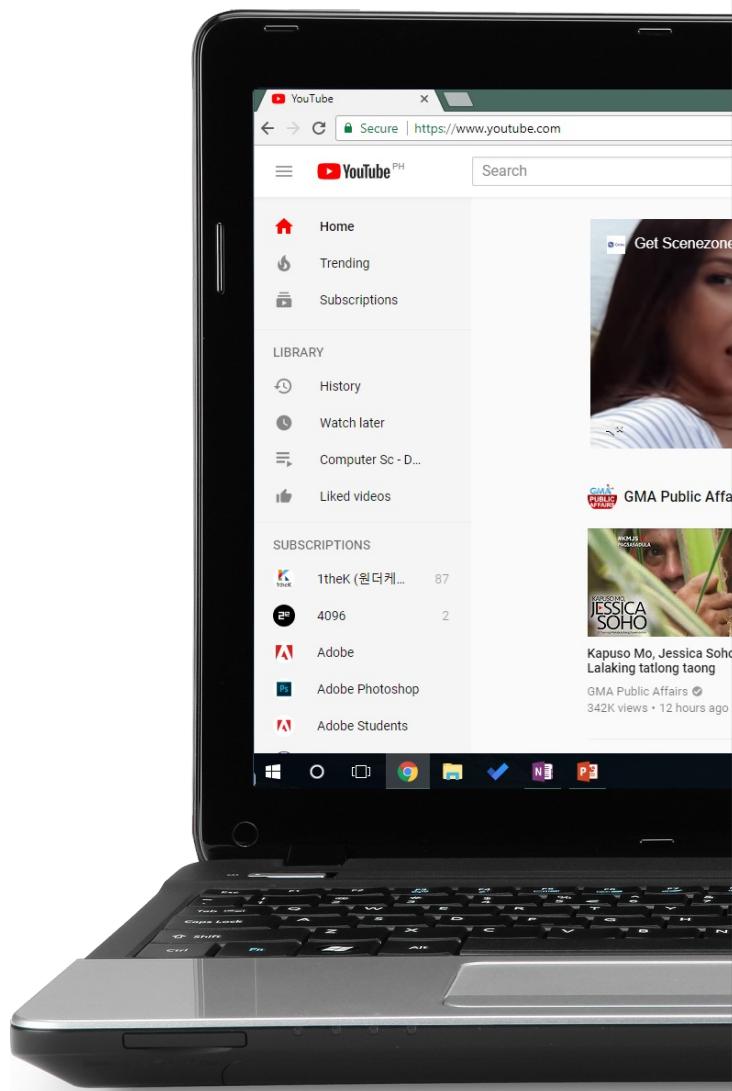
Kapuso Mo, Jessica Soho: Ang kapitbahay naming

GMA Public Affairs ✓  
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Kapuso Mo, Jessica Soho: From construction worker to

GMA Public Affairs ✓  
190K views • 12 hours ago







## Responsive Website Basics (in 3 simple steps)

<https://www.youtube.com/watch?v=h3IdEqpjMvQ>

# 1) The Meta Viewport Tag

---

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

Where no man has gone X Michael

file:///C:/Users/micha/Documents/Codes/HTML/RWD%2001%20Viewport/index.html

Nexus 5X 412 732 75% Online 12:29

Where no man has gone before

Space, the final frontier. These are the voyages of the Starship Enterprise. It's continuing mission: To explore strange new worlds, to seek out new life and new civilizations, to boldly go where no man has gone before.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent est purus, lobortis quis purus id, gravida ullamcorper erat. Integer nisi augue, vestibulum quis porta a, faucibus ut mi. Duis porta neque nec lectus imperdiet posuere. Quisque lorem lorem, hendrerit eu lectus at, tempor egestas erat. Nulla at ipsum interdum, faucibus sapien id, venenatis ipsum. Morbi efficitur vehicula lectus, in laoreet purus efficitur sit amet. Mauris in tincidunt augue, sit amet ornare neque. Mauris porttitor mauris pellentesque, tincidunt elit eget, condimentum dui. Ut tincidunt sapien eu augue sollicitudin, a tristique quam sollicitudin.

Sed mattis dignissim urna. Mauris cursus quis ipsum id ornare. Praesent semper ligula sit amet bibendum rhoncus. Mauris nunc ex, imperdiet nec commodo at, dapibus non nibh. Suspendisse faucibus soll

Elements Console Sources Network Performance Memory

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>Where no man has gone before</title>
    <style>
      </style>
  </head>
  <body>
    <article> == $0
      <h1>Where no man has gone before</h1>
      <p>
        "Space, the final frontier. These are the voyages of the Starship Enterprise. It's continuing mission: To explore strange new worlds, to seek out new life and new civilizations, to boldly go where no man has gone before."
      </p>
      <p>
        "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent est purus, lobortis quis purus id, gravida ullamcorper erat. Integer nisi augue, vestibulum quis porta a, faucibus ut mi. Duis porta neque nec lectus imperdiet posuere. Quisque lorem lorem, hendrerit eu lectus at, tempor egestas erat. Nulla at ipsum interdum, faucibus sapien id, venenatis ipsum. Morbi efficitur vehicula lectus, in laoreet purus efficitur sit amet. Mauris in tincidunt augue, sit amet ornare neque. Mauris porttitor mauris pellentesque, tincidunt elit eget, condimentum dui. Ut tincidunt sapien eu augue sollicitudin, a tristique quam sollicitudin."
      </p>
    </article>
  </body>
</html>
```

html body article

Styles Event Listeners DOM Breakpoints Properties

Filter :hov .cls +

```
element.style { }
}
article, aside, footer, header, hgroup, main, nav, section {
  display: block;
}
```

margin border padding 964 x 1021.110

# Without the meta viewport tag

Text looks a bit small. You can even double tap the text just to zoom in.

The screenshot shows the Chrome DevTools interface with the 'Elements' tab selected. On the left, a mobile device preview shows the page 'Where no man has gone before'. The page content includes an 

# element and several elements containing placeholder text (Lorem ipsum). On the right, the DOM tree is displayed, showing the ,

## 2) The HTML Structure

---

# Two Kinds of HTML Elements

---

## CONTAINER

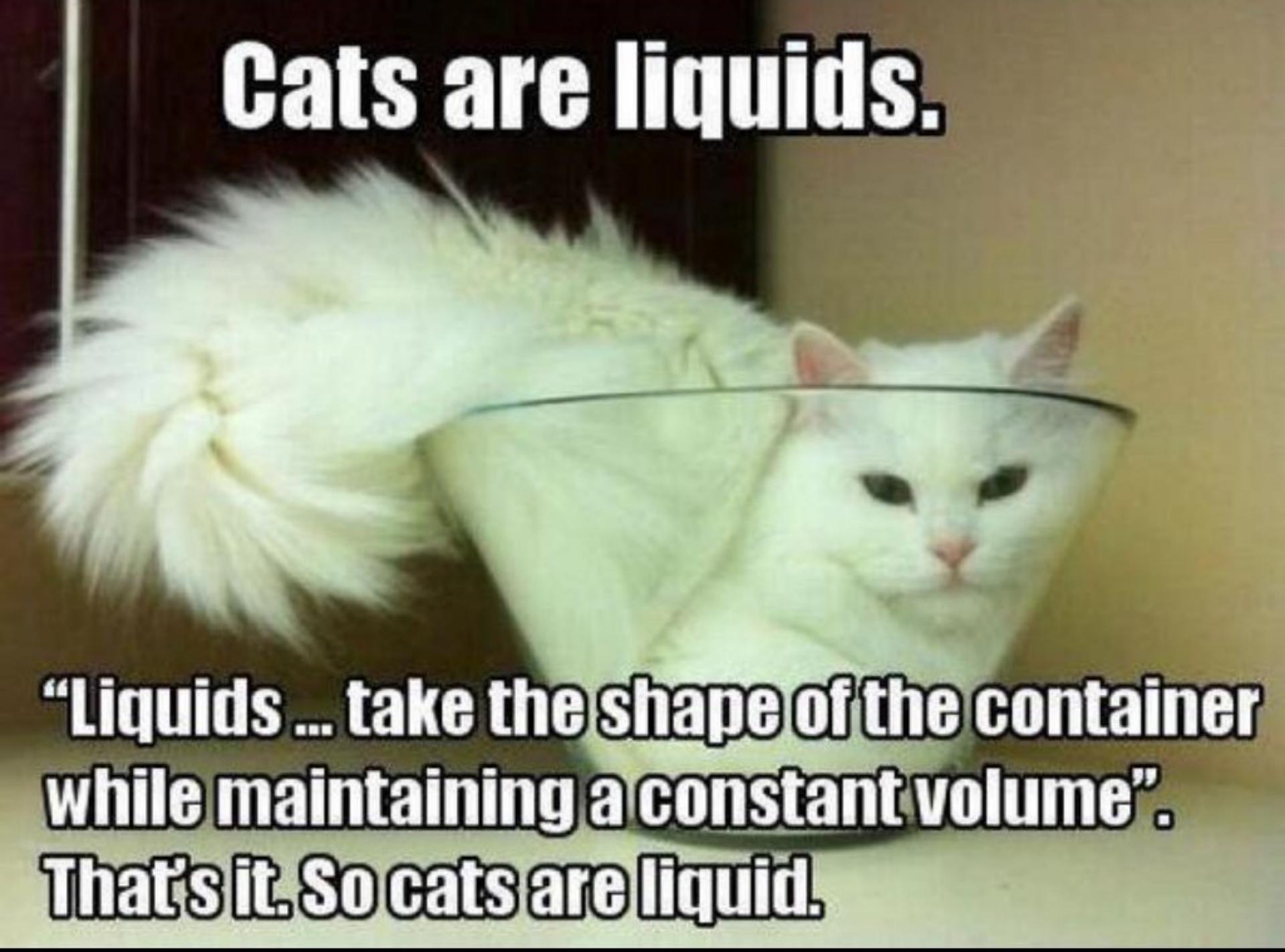
---

- Element used for layout
- Has form, volume, shape
- Example includes div, article, header, section, aside
- They inform the structure of the page

## CONTENT

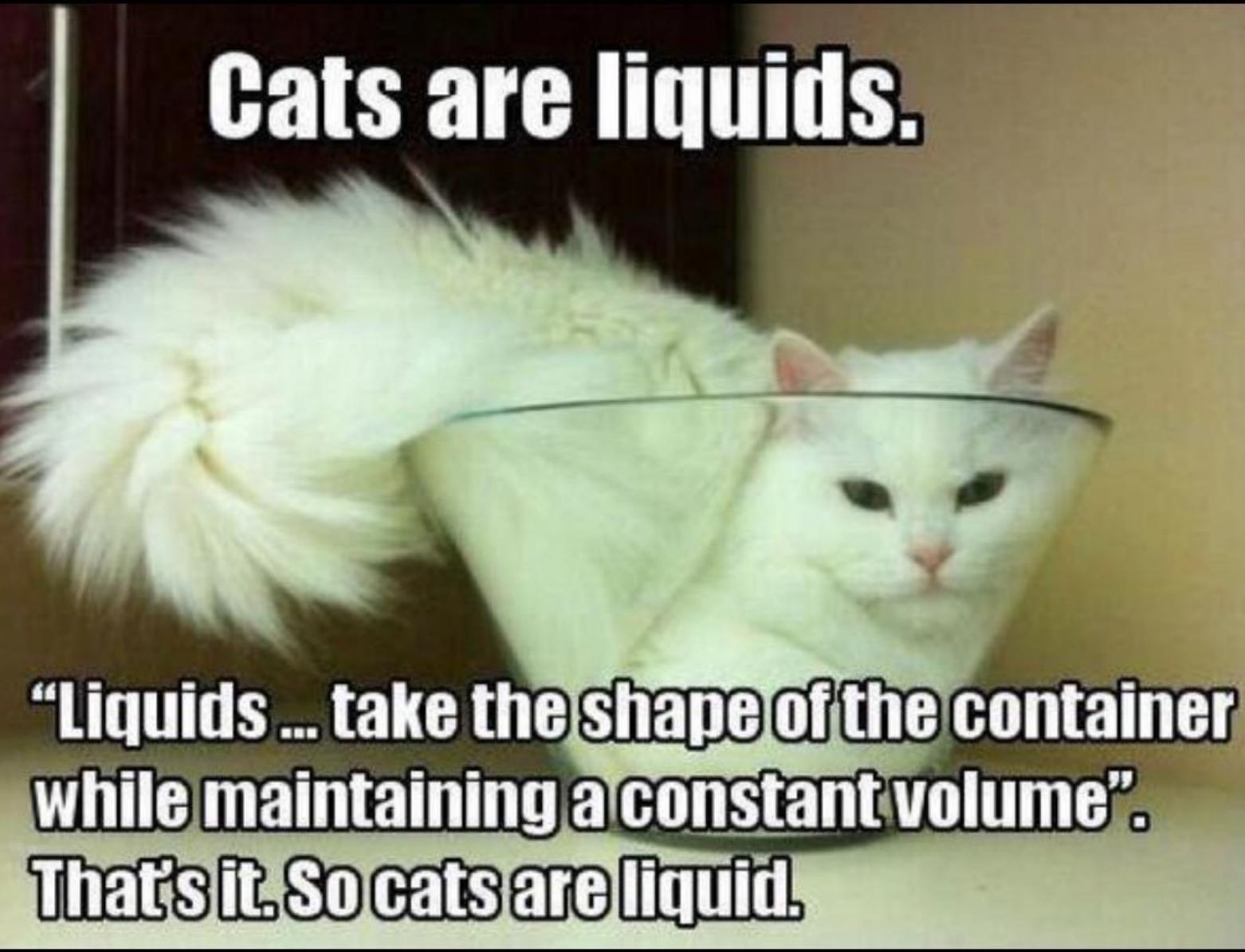
---

- Elements which hold content
- Shall be as wide as its container (parent)
- May be text, images, forms, buttons, or anything that is not a container.

A fluffy white cat is sitting inside a clear glass bowl. The cat's fur is very light-colored, almost white, and it has a slightly grumpy expression. The bowl is transparent and sits on a dark surface. In the background, there's a dark wall and a vertical white object, possibly a door handle or a piece of furniture.

# Cats are liquids.

**“Liquids ... take the shape of the container while maintaining a constant volume”.  
That's it. So cats are liquid.**

A white cat is lying down in a shallow, greenish-blue bowl. The cat's body is curved, and its head is resting near the rim of the bowl. The background is a plain, light-colored wall.

**Cats are liquids.**

**“Liquids ... take the shape of the container while maintaining a constant volume”.  
That's it. So cats are liquid.**

Cat = Content

Bowl = Container

C:\Users\micha\Documents\Codes\HTML\RWD 02 HTML Struct\index.html - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

new 1 index.html

```
5 <meta name="viewport" content="width=device-width, initial-scale=1">
6 <title>Where no man has gone before</title>
7 <style>
8     article{
9         width: 50%;
10        padding: 10px;
11        float: left;
12        box-sizing: border-box;
13    }
14    body{
15        width: 960px;
16        margin-left: auto;
17        margin-right: auto;
18    }
19 </style>
20 </head>
21 <body>
22     <h1>Where no man has gone before</h1>
23     <article>
24         <p>Space, the final frontier. These are the voyages of the
Starship Enterprise. It's continuing mission: To explore strange
new worlds, to seek out new life and new civilizations, to boldly
go where no man has gone before.</p>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.

```

Hyper Text Markup Language length : 2,670 lines : 34 Ln:1 Col:1 Sel:0|0 Windows (CR LF) UTF-8 INS

# Only Containers

Only containers were given specific values for their formatting such as width.

Content items such as h1 and p were left untouched.



# Where no man has gone before

Space, the final frontier. These are the voyages of the Starship Enterprise. It's continuing mission: To explore strange new worlds, to seek out new life and new civilizations, to boldly go where no man has gone before.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent est purus, lobortis quis purus id, gravida ullamcorper erat. Integer nisi augue, vestibulum quis porta a, faucibus ut mi. Duis porta neque nec lectus imperdiet posuere. Quisque lorem lorem, hendrerit eu lectus at, tempor egestas erat. Nulla at ipsum interdum, faucibus sapien id, venenatis ipsum. Morbi efficitur vehicula lectus, in laoreet purus efficitur sit amet. Mauris in tincidunt augue, sit amet ornare neque. Mauris porttitor mauris pellentesque, tincidunt elit eget, condimentum dui. Ut tincidunt sapien eu augue sollicitudin, a tristique quam sollicitudin.

Sed mattis dignissim urna. Mauris cursus quis ipsum id ornare. Praesent semper ligula sit amet bibendum rhoncus. Mauris nunc ex, imperdiet nec commodo at, dapibus non nibh. Suspendisse faucibus soll

A long time ago in a galaxy far far away, lived twelve little girls in two straight lines. They left the house at half past nine in two straight lines in rain or shine. The smallest one was Madeline.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent est purus, lobortis quis purus id, gravida ullamcorper erat. Integer nisi augue, vestibulum quis porta a, faucibus ut mi. Duis porta neque nec lectus imperdiet posuere. Quisque lorem lorem, hendrerit eu lectus at, tempor egestas erat. Nulla at ipsum interdum, faucibus sapien id, venenatis ipsum. Morbi efficitur vehicula lectus, in laoreet purus efficitur sit amet. Mauris in tincidunt augue, sit amet ornare neque. Mauris porttitor mauris pellentesque, tincidunt elit eget, condimentum dui. Ut tincidunt sapien eu augue sollicitudin, a tristique quam sollicitudin.

Sed mattis dignissim urna. Mauris cursus quis ipsum id ornare. Praesent semper ligula sit amet bibendum rhoncus. Mauris nunc ex, imperdiet nec commodo at, dapibus non nibh. Suspendisse faucibus soll

## 3) Media Query

---

“

# Media Queries

Small snippets of CSS code which query (ask) the screen for its present size. It can also look for other conditions like dimensions of the device, resolution, orientation, and others.

```
@media (max-width: 960px) {  
    body {  
        width: auto;  
    }  
    article{  
        width: auto;  
        float: none;  
    }  
}
```

This checks if the screen size is less than or equal to 960px

```
@media (max-width: 960px) {  
    body {  
        width: auto;  
    }  
    article{  
        width: auto;  
        float: none;  
    }  
}
```

If it is true, then use these properties for these elements

C:\Users\micha\Documents\Codes\HTML\RWD 03 Media Query\index.html - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

new 1 index.html

```
13     padding: 10px;
14     float: left;
15     box-sizing: border-box;
16 }
17 body{
18     width: 960px;
19     margin-left: auto;
20     margin-right: auto;
21 }
22 @media (max-width: 960px) {
23     body {
24         width: auto;
25     }
26     article{
27         width: auto;
28         float: none;
29     }
30 }
31 </style>
32 </head>
33 <body>
34     <h1>Where no man has gone before</h1>
35     <article>
36         <p>Space, the final frontier. These are the voyages of the
```

Hyper Text Markup Language length : 2,839 lines : 46 Ln : 22 Col : 40 Sel : 0 | 0 Windows (CR LF) UTF-8 INS

## In code

This is our media query as applied in the code



```
<!DOCTYPE html>
<html>
  <head>...</head>
  ...<body> == $0
    <h1>Where no man has gone before</h1>
    ><article>...</article>
    ><article>...</article>
  </body>
</html>
```

Filter	:hov .cls +
element.style {	}
@media (max-width: 960px)	
body {	index.html:23
width: auto;	
}	
body {	index.html:17
width: 960px;	
margin-left: auto;	
margin-right: auto;	
}	
body {	user agent stylesheet
display: block;	
margin: 8px;	
}	

# As previewed on a mobile device

You can see how the page has adapted thanks to the media query

# Where no man has gone before

Space, the final frontier. These are the voyages of the Starship Enterprise. It's continuing mission: To explore strange new worlds, to seek out new life and new civilizations, to boldly go where no man has gone before.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent est purus, lobortis quis purus id, gravida ullamcorper erat. Integer nisi augue, vestibulum quis porta a, faucibus ut mi. Duis porta neque nec lectus imperdiet posuere. Quisque lorem lorem, hendrerit eu lectus at, tempor egestas erat. Nulla at ipsum interdum, faucibus sapien id, venenatis ipsum. Morbi efficitur vehicula lectus, in laoreet purus efficitur sit amet. Mauris in tincidunt augue, sit amet ornare neque. Mauris porttitor mauris pellentesque, tincidunt elit eget, condimentum dui. Ut tincidunt sapien eu augue sollicitudin, a tristique quam sollicitudin.

Sed mattis dignissim urna. Mauris cursus quis ipsum id ornare. Praesent semper ligula sit amet bibendum rhoncus. Mauris nunc ex, imperdiet nec commodo at, dapibus non nibh. Suspendisse faucibus soll

A long time ago in a galaxy far far away, lived twelve little girls in two straight lines. They left the house at half past nine in two straight lines in rain or shine. The smallest one was Madeline.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent est purus, lobortis quis purus id, gravida ullamcorper erat. Integer nisi augue, vestibulum quis porta a, faucibus ut mi. Duis porta neque nec lectus imperdiet posuere. Quisque lorem lorem, hendrerit eu lectus at, tempor egestas erat. Nulla at ipsum interdum, faucibus sapien id, venenatis ipsum. Morbi efficitur vehicula lectus, in laoreet purus efficitur sit amet. Mauris in tincidunt augue, sit amet ornare neque. Mauris porttitor mauris pellentesque, tincidunt elit eget, condimentum dui. Ut tincidunt sapien eu augue sollicitudin, a tristique quam sollicitudin.

Sed mattis dignissim urna. Mauris cursus quis ipsum id ornare. Praesent semper ligula sit amet bibendum rhoncus. Mauris nunc ex, imperdiet nec commodo at, dapibus non nibh. Suspendisse faucibus soll

# On desktop, it looks just the same

C:\Users\micha\Documents\Codes\HTML\RWD 04 Image maxwidth\index.html - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

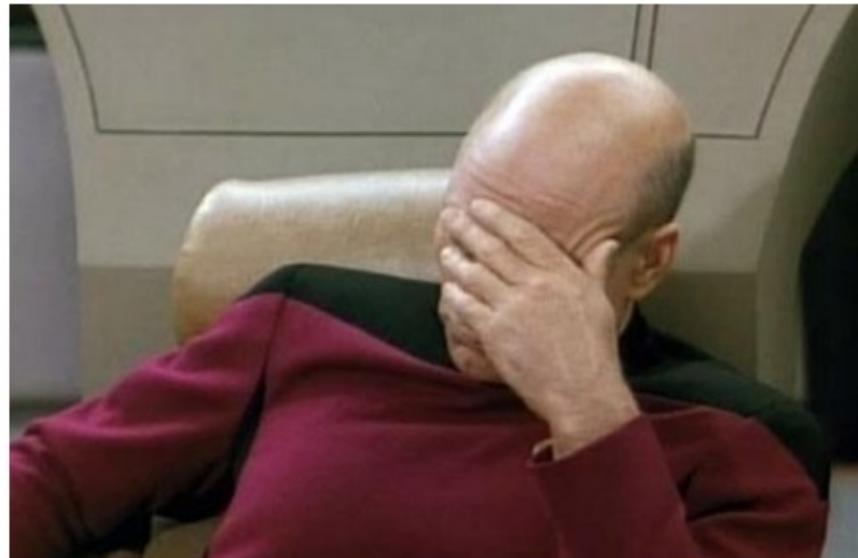
new 1 index.html index.html

```
19         margin-left: auto;
20         margin-right: auto;
21     }
22     img{
23         width: 100%;
24     }
25     @media (max-width: 960px) {
26         body {
27             width: auto;
28         }
29         article{
30             width: auto;
31             float: none;
32         }
33     }
34     </style>
35 </head>
36 <body>
37     <h1>Where no man has gone before</h1>
38     <article>
39         
40         <p>Space, the final frontier. These are the voyages of the
Starship Enterprise. It's continuing mission: To explore strange
new worlds, to seek out new life and new civilizations, to boldly
```

## Add an image

You can add an image and make it 100% the size of its container. In this case, the container is the first column.

## Where no man has gone before



Space, the final frontier. These are the voyages of the Starship Enterprise. It's continuing mission: To explore strange new worlds, to seek out new life and new civilizations, to boldly go where no man has gone before.

A long time ago in a galaxy far far away, lived twelve little girls in two straight lines. They left the house at half past nine in two straight lines in rain or shine. The smallest one was Madeline.

*Placeholder text (Lorem ipsum)*

*Placeholder text (Sed mattis)*

# An image sits just right in the column



```
<!DOCTYPE html>
<html>
  <head>...</head>
  ...<body> == $0
    <h1>Where no man has gone before</h1>
    <article>...</article>
    <article>...</article>
  </body>
</html>
```

html body

Styles Event Listeners DOM Breakpoints Properties

Filter :hov .cls +

```
element.style { }
@media (max-width: 960px)
body { width: auto; index.html:26 }
body { width: 960px; margin-left: auto; margin-right: auto; index.html:17 }
```

body { user agent stylesheet display: block; margin: 8px; }

margin 8
border -
padding -
412 x 1225.440
-
-
-
8

Filter Show all

```
▶ display block
▶ height 1225.44...
▶ margin-bottom 8px
▶ margin-left 0px
▶ margin-right 0px
▶ margin-top 8px
```

As viewed on mobile