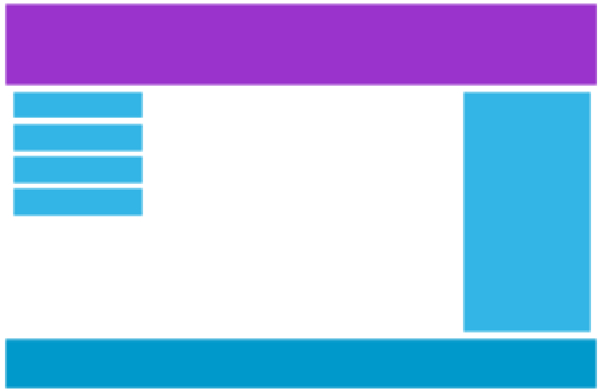
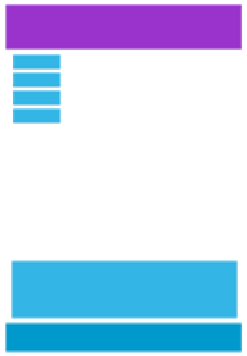
CSS Responsive Web Design

Designing For The Best Experience For All Users

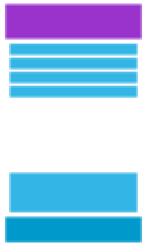
- Responsive web design makes your web page look good on all devices.
- Responsive web design uses only HTML and CSS.
- Web pages should not leave out information to fit smaller devices, but rather adapt its content to fit any device:



Desktop



Tablet



phone

Viewport

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

Viewport is user's visible area of a web page.

- HTML5 introduced a method to let web designers take control over

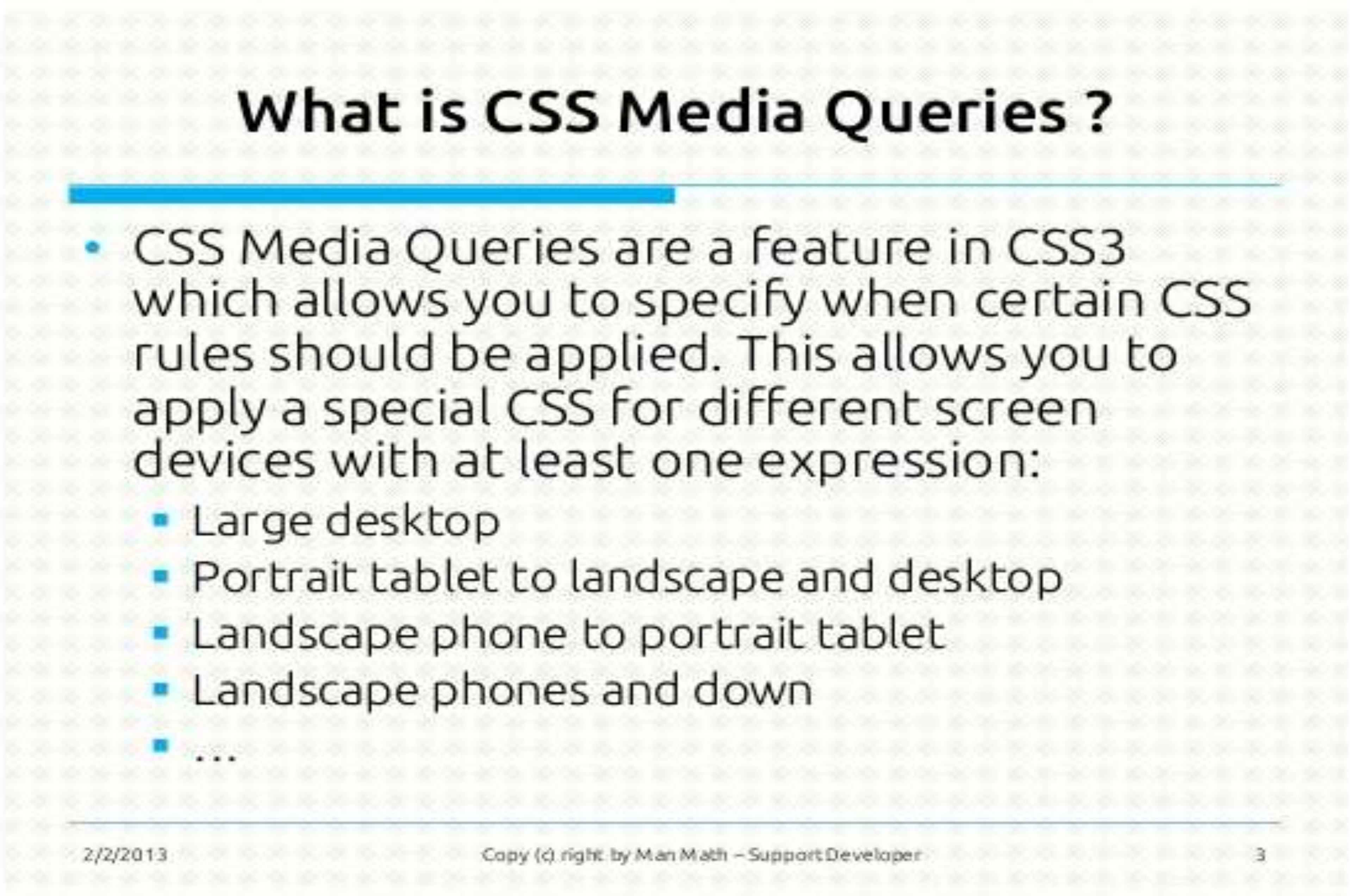
the viewport, through the <meta> tag.

- This gives the browser instructions on how to control the page's dimensions and scaling.
- The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).
- The initial-scale=1.0 part sets the initial zoom level when the page is first loaded by the browser.

Grid view

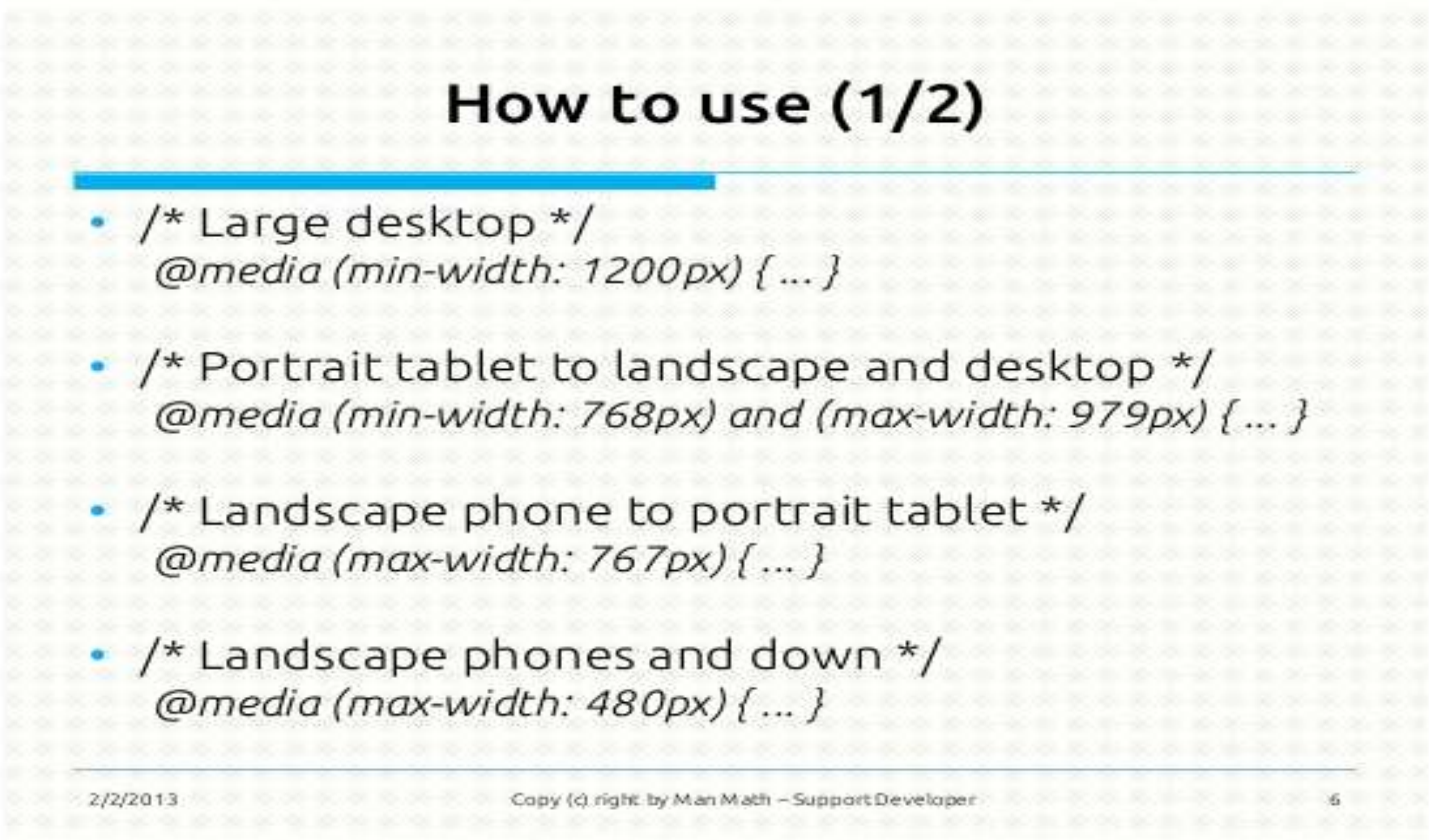
- A responsive grid-view often has 12 columns, and has a total width of 100%, and will shrink and expand as you resize the browser window.
- We want to use a responsive grid-view with 12 columns, to have more control over the web page.

Note - webpage does not look good when you resize the browser window to a very small width. This is fixed using media queries.



What is CSS Media Queries ?

- CSS Media Queries are a feature in CSS3 which allows you to specify when certain CSS rules should be applied. This allows you to apply a special CSS for different screen devices with at least one expression:
  - Large desktop
  - Portrait tablet to landscape and desktop
  - Landscape phone to portrait tablet
  - Landscape phones and down
  - …



How to use (1/2)

- /* Large desktop */
  @media (min-width: 1200px) { ... }

- /* Portrait tablet to landscape and desktop */
  @media (min-width: 768px) and (max-width: 979px) { ... }

- /* Landscape phone to portrait tablet */
  @media (max-width: 767px) { ... }

- /* Landscape phones and down */
  @media (max-width: 480px) { ... }

QUERY

Browser Support

The numbers in the table specifies the first browser version that fully supports the @media rule.

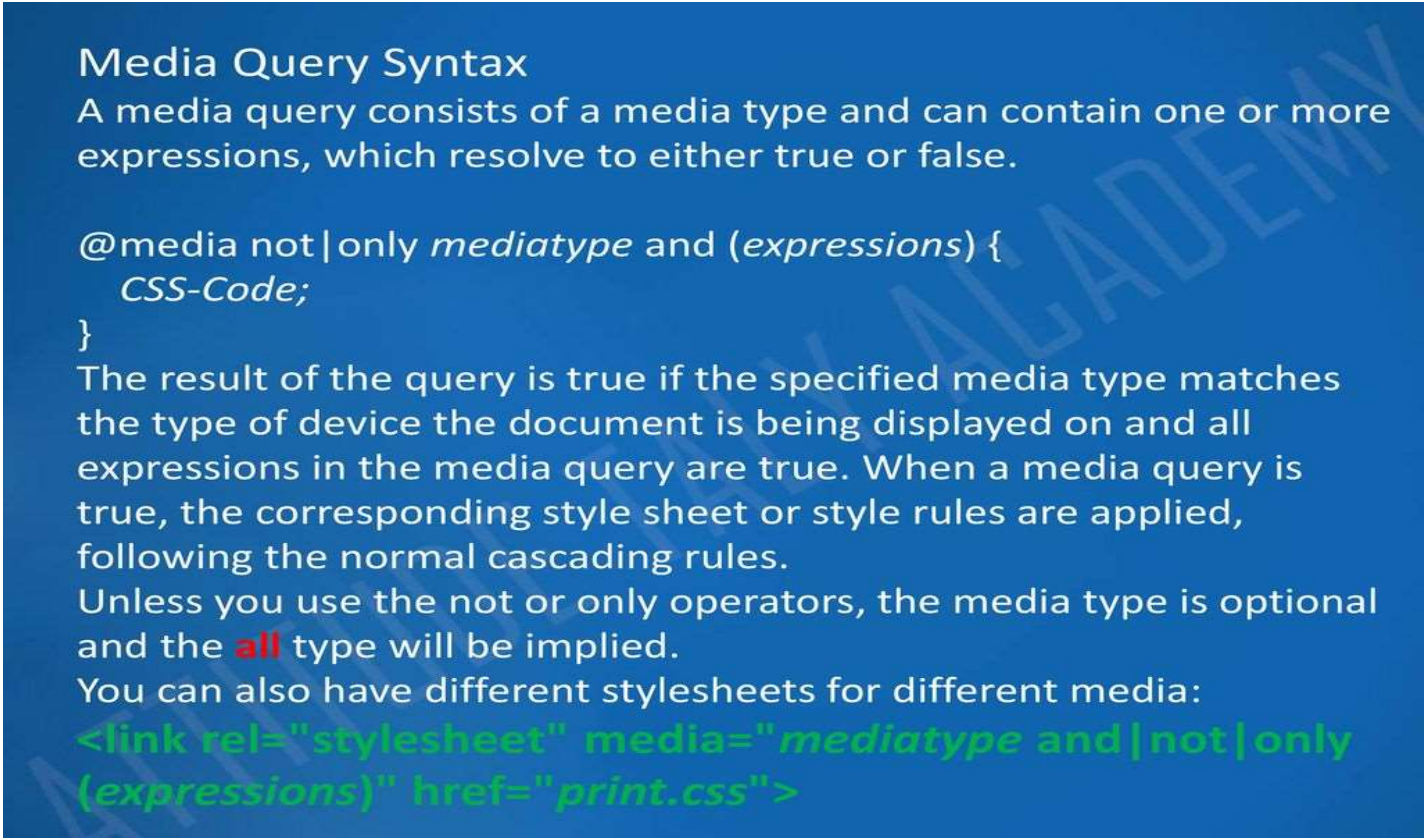
Element	◉	e	🦊	🧭	O
<video>	4.0	9.0	3.5	4.0	10.5

How to use (2/2)

```
<link rel="stylesheet" media="(max-width:
800px)"href="style.css" />
```

```
<link rel="stylesheet" media="screen and
(min-width: 701px) and (max-width: 900px)"
href="style.css" />
```

More …



Media Query Syntax

A media query consists of a media type and can contain one or more expressions, which resolve to either true or false.

```
@media not|only mediatype and (expressions) {
  CSS-Code;
}
```

The result of the query is true if the specified media type matches the type of device the document is being displayed on and all expressions in the media query are true. When a media query is true, the corresponding style sheet or style rules are applied, following the normal cascading rules.

Unless you use the not or only operators, the media type is optional and the **all** type will be implied.

You can also have different stylesheets for different media:

```
<link rel="stylesheet" media="mediatype and|not|only (expressions)" href="print.css">
```

QUERY

CSS Media Types

Value	Description
all	Used for all media type devices
print	Used for printers
screen	Used for computer screens, tablets, smart-phones etc.
speech	Used for screenreaders that "reads" the page out loud

QUERY

Media Queries Simple

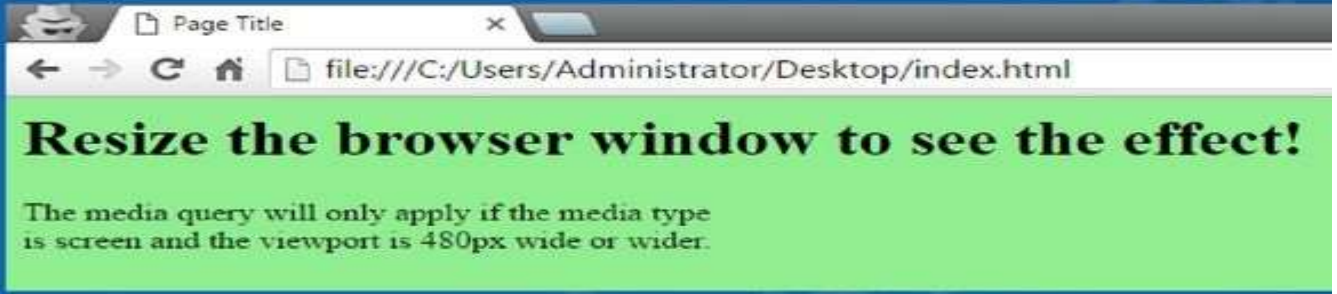
One way to use media queries is to have an alternate CSS section right inside your style sheet.

The following example changes the background-color to light green if the viewport is 480 pixels wide or wider (if the viewport is less than 480 pixels, the background-color will be pink):

Example

```
<style>
body {
   background-color: pink;
}
@media screen and (min-width: 480px) {
   body {
      background-color: lightgreen;
   }
}
</style>
</head>
<body>
<h1>Resize the browser window to see the effect!</h1>
<p>The media query will only apply if the media type <br>
is screen and the viewport is 480px wide or wider.</p>
</body>
```

Desktop



Resize the browser window to see the effect!

The media query will only apply if the media type
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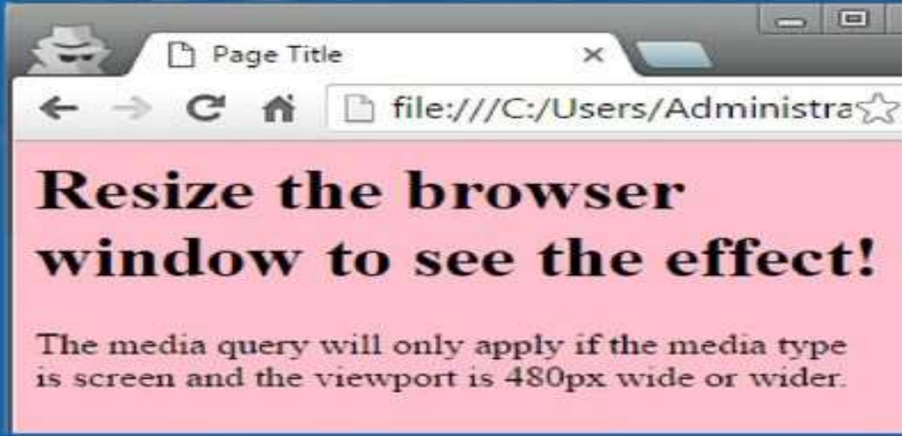
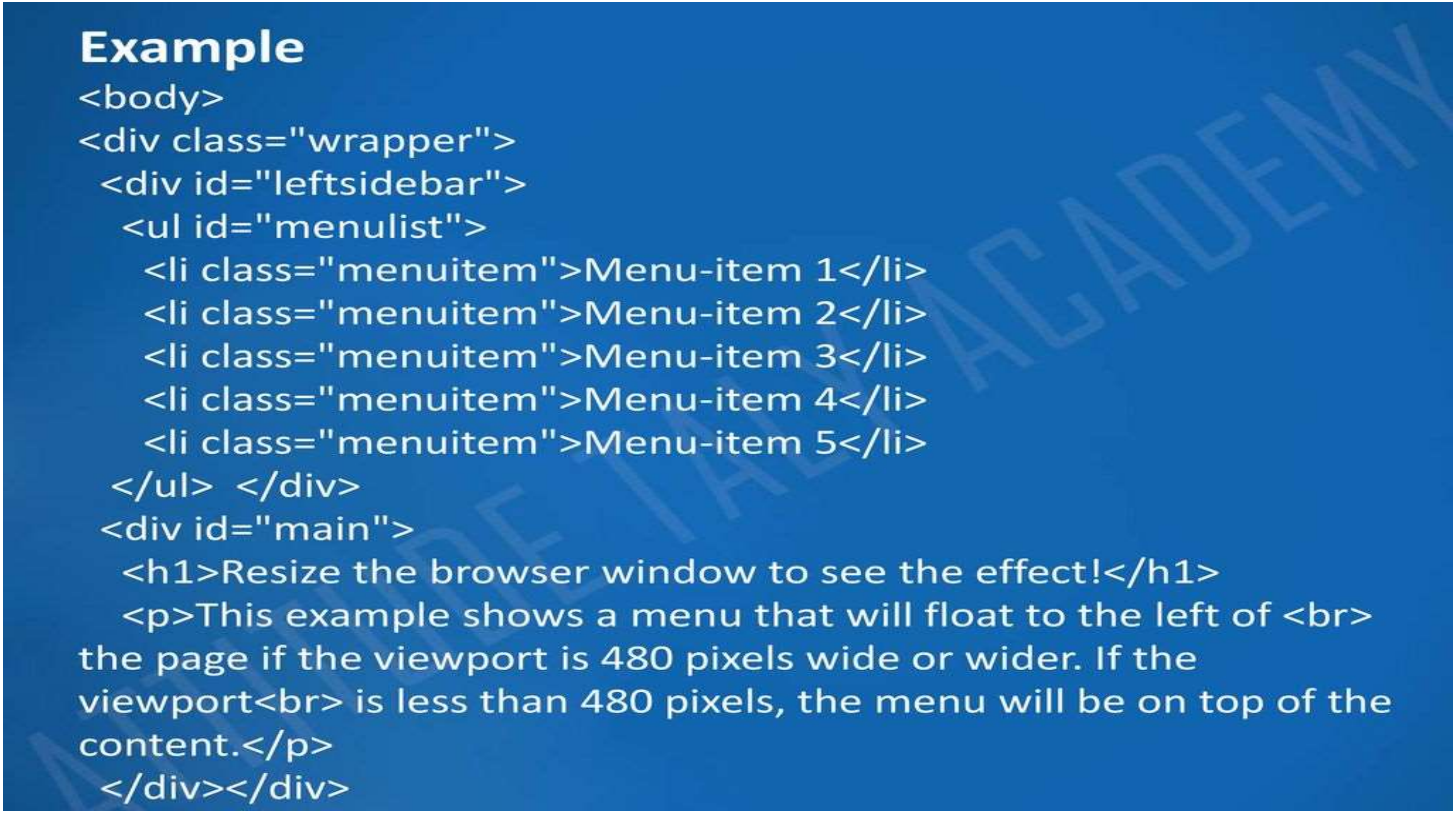
Mobile Phone



Resize the browser window to see the effect!

The media query will only apply if the media type
is screen and the viewport is 480px wide or wider.

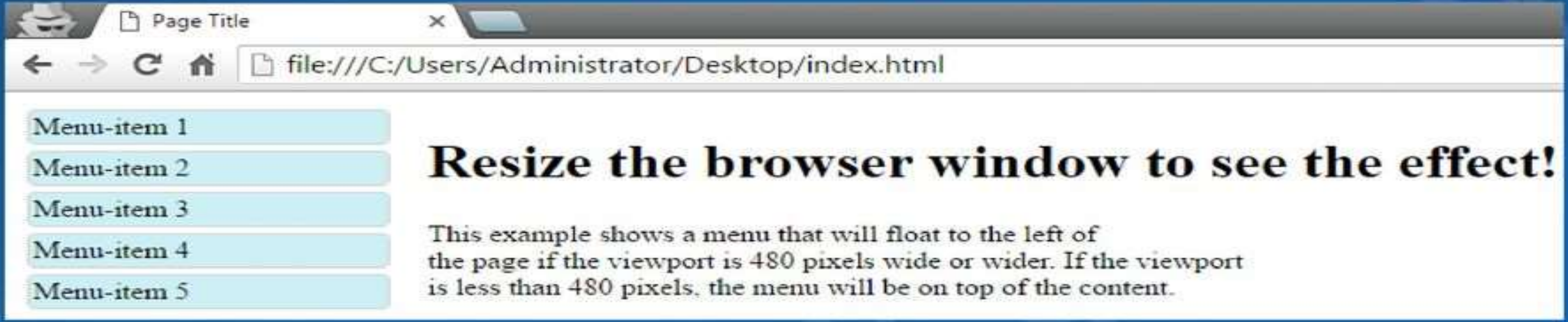
```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
.wrapper {overflow:auto;}
#main {margin-left: 4px;}
#leftsidebar {float: none;width: auto;}
#menulist {margin:0;padding:0;}
.menuitem {
   background:#CDF0F6;
   border:1px solid #d4d4d4;
   border-radius:4px;
   list-style-type:none;
   margin:4px;
   padding:2px;
}
@media screen and (min-width: 480px) {
   #leftsidebar {width:200px;float:left;}
   #main {margin-left:216px;}
}
</style>
</head>
```



Example

```
<body>
<div class="wrapper">
 <div id="leftsidebar">
  <ul id="menulist">
   <li class="menuitem">Menu-item 1</li>
   <li class="menuitem">Menu-item 2</li>
   <li class="menuitem">Menu-item 3</li>
   <li class="menuitem">Menu-item 4</li>
   <li class="menuitem">Menu-item 5</li>
  </ul>  </div>
 <div id="main">
  <h1>Resize the browser window to see the effect!</h1>
  <p>This example shows a menu that will float to the left of <br>
the page if the viewport is 480 pixels wide or wider. If the
viewport<br> is less than 480 pixels, the menu will be on top of the
content.</p>
 </div></div>
```

Desktop



Menu-item 1
Menu-item 2
Menu-item 3
Menu-item 4
Menu-item 5

Resize the browser window to see the effect!

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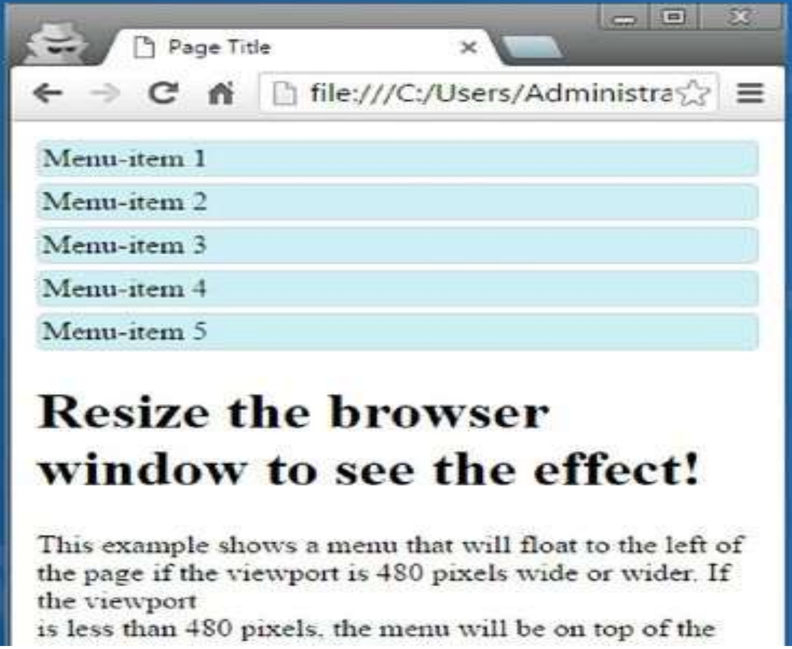
Mobile Phone



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