

Media Queries

Responsive Web Design



SoftUni Team
Technical Trainers



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Software University

<https://softuni.bg>

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sli.do

#html-css



**Resize, Hide, Shrink, or Enlarge A website
to Make It Look Good On All Devices**

What is Responsive Web Design?

- **Automatically resize, hide, shrink, or enlarge**, a website, to make it look good on **all devices** (desktops, tablets, and phones)

- Setting the Viewport:

- Add the following **<meta>** element:

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

- This will give the browser instructions on how to control the page's **dimensions** and **scaling**



- Responsive website design consists of the following three main components:
 - **Flexible layouts**
 - Using a flexible grid to create the website layout
 - That will dynamically resize to any width
 - **Media queries**
 - Allow designers to specify different styles for specific browser and device circumstances

- **Flexible Media**
 - Makes media (images, video and other format) scalable



Benefits of Using a Responsive Website

- Increased **traffic** from mobile users
- Lower **cost** and website maintenance
- Provides a seamless **User Experience (UI)**
- Adapts easily to any screen size
- Improves your **SEO** efforts

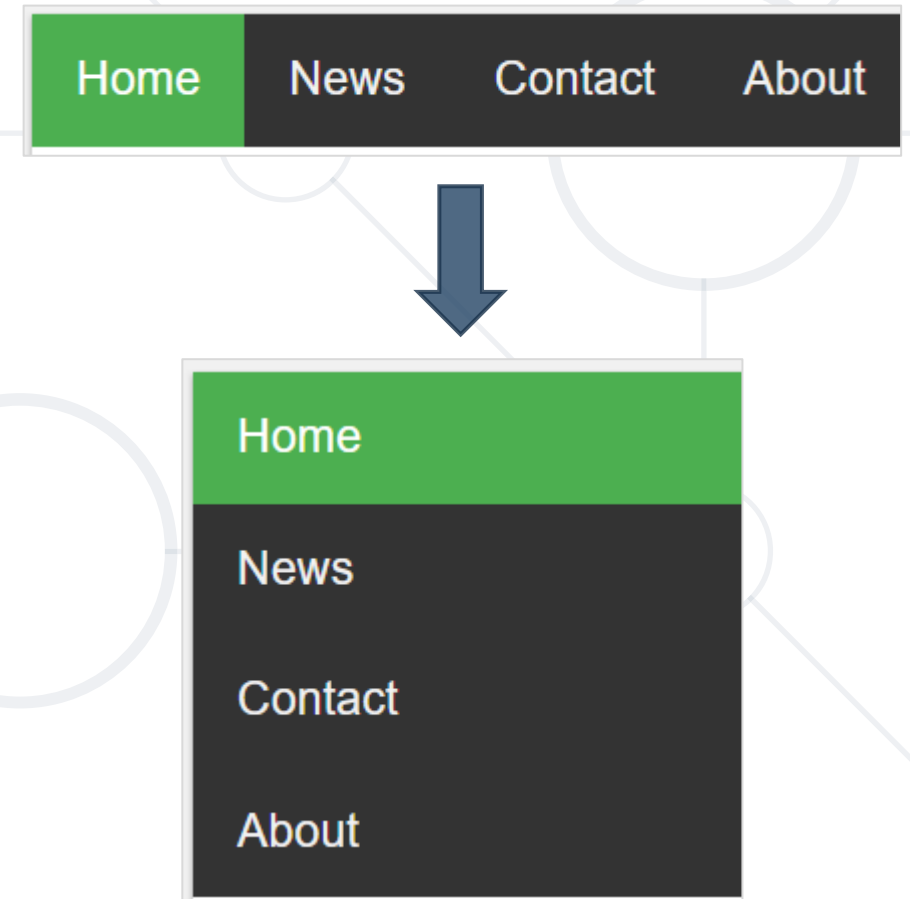


Why Responsive Website Design Works?

- **Google** prioritizes responsive websites
- **73%** of total **eCommerce** revenue comes from mobile
- **94%** of people **judges** websites on responsive web design
- Almost **63%** of all Internet **access** is done through the phone
- **85%** of adults own a **smart phone**
- First **impressions** are **94%** design-related
- **85%** of people want **Mobile-Friendly** websites
- Responsive design integrates **social media**

What is a Media Query?

- Media Queries are a feature of CSS that enable webpage content to adapt to different screen sizes and resolutions
- They are a fundamental part of responsive web design and are used to customize the appearance of websites for multiple devices



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

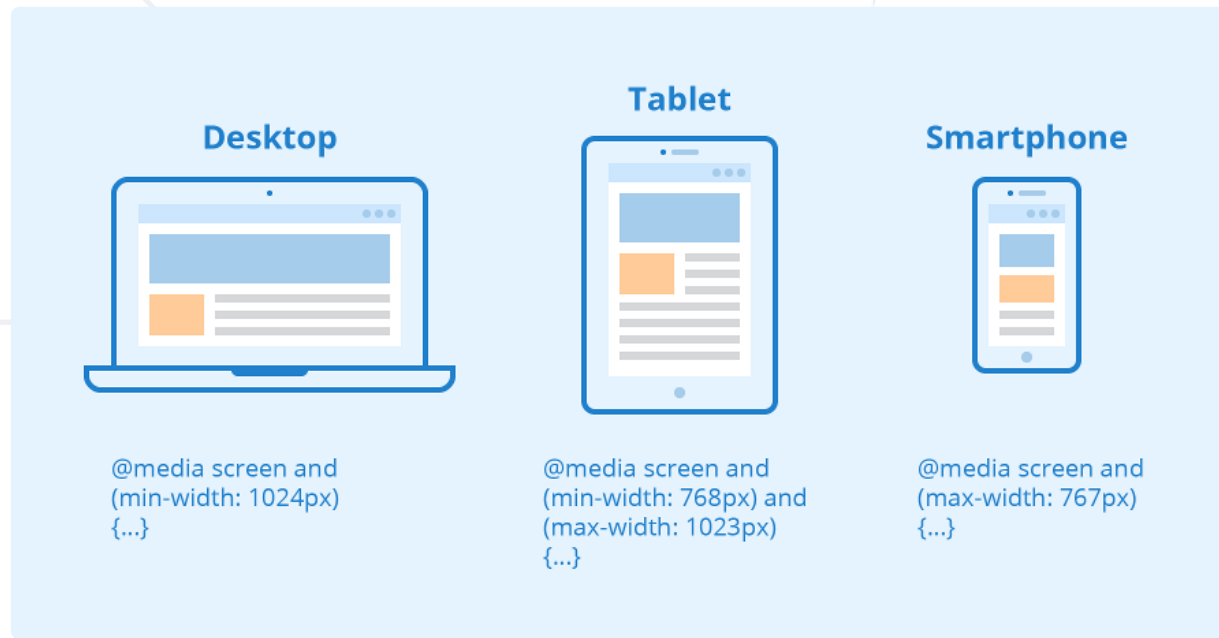
```
@media (max-width: 600px) {  
  .menu { display: block }  
}
```

if (width <= 600px),
apply these CSS rules

- The result of the query is **true** if the specified media type matches the type of device the document is being displayed on
- Unless you use the **not** or **only** operators, the media type is **optional**, and the all type will be implied

- A **media type**, which tells the browser what kind of media this code is for (e.g. print, or screen)
- A **media feature rule** - test that must be passed for the contained CSS to be applied
- A set of **CSS rules** that will be applied if the test passes and the media type is correct

- Media queries in CSS3 look at the **capability** of the device
- Media queries can be used to check many things, such as:
 - width and height of the **viewport**
 - width and height of the **device**
 - **orientation** (is the tablet/phone in **landscape** or **portrait** mode?)
 - **resolution**



Introduction to Media Types

- Media Types describe the general category of a given device:
 - **all** - used for all media type devices
 - **print** - used for printers
 - **screen** - used for computer screens, tablets, smart-phones etc.

Media Queries + CSS Grid – Example

```
.container {  
  grid-template-areas:  
    "header"  
    "sidebar"  
    "main";  
}
```

```
@media (min-width: 600px) {  
  .container {  
    grid-template-areas:  
      "header header"  
      "sidebar main";  
  }  
}
```

Width < 600px

Header

Sidebar

Main area

Width >= 600px

Header

Sidebar

Main area

MEDIA FEATURE

```
@media and|not|only (media feature)  
height  
width  
max-height / min-height  
max-width / min-width
```

Rule Used In media queries to Apply Different Styles for Different media types/devices

- After specifying the type, you can then target a media feature with a **rule**
 - Width and height - we can apply CSS if the viewport is above or below a certain width, using **width**

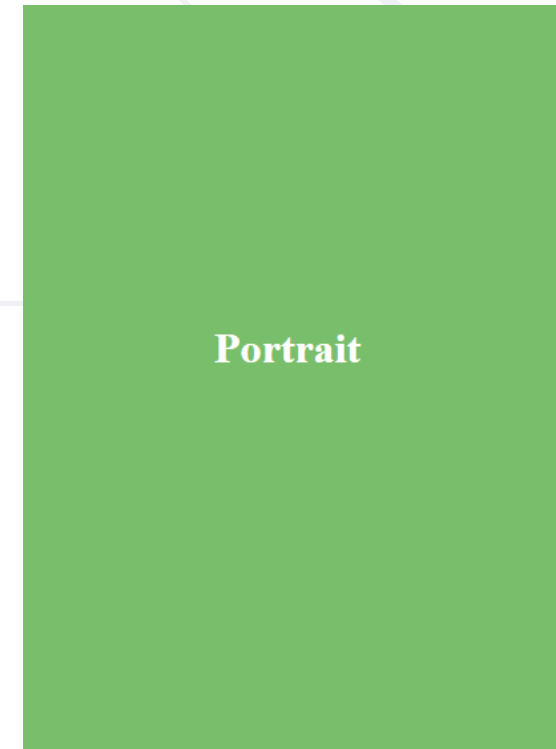
```
@media screen and (width: 600px) {  
  body {  
    color: red;  
  }  
}
```

- We can apply CSS if the viewport is under or above an exact width - using **min-width**, **max-width**

```
@media screen and (max-width: 400px) {  
  body {  
    color: blue;  
  }  
}
```

- Orientation - allows to test for **portrait** or **landscape** mode
 - **Landscape** – when window is **wider than** its **height**
 - **Portrait** – when window is **higher** than its **wide**

```
@media (orientation: portrait) {  
  .portrait { display: block; }  
  .landscape { display: none; }  
}
```



CSS Grid Responsive Layout

```
@media (max-width: 500px) {  
  body {  
    display: grid;  
    grid-template-areas:  
      "header header"  
      "aside aside"  
      "main main"  
      "footer footer";  
  }  
}
```



Header

Home
About
Contacts

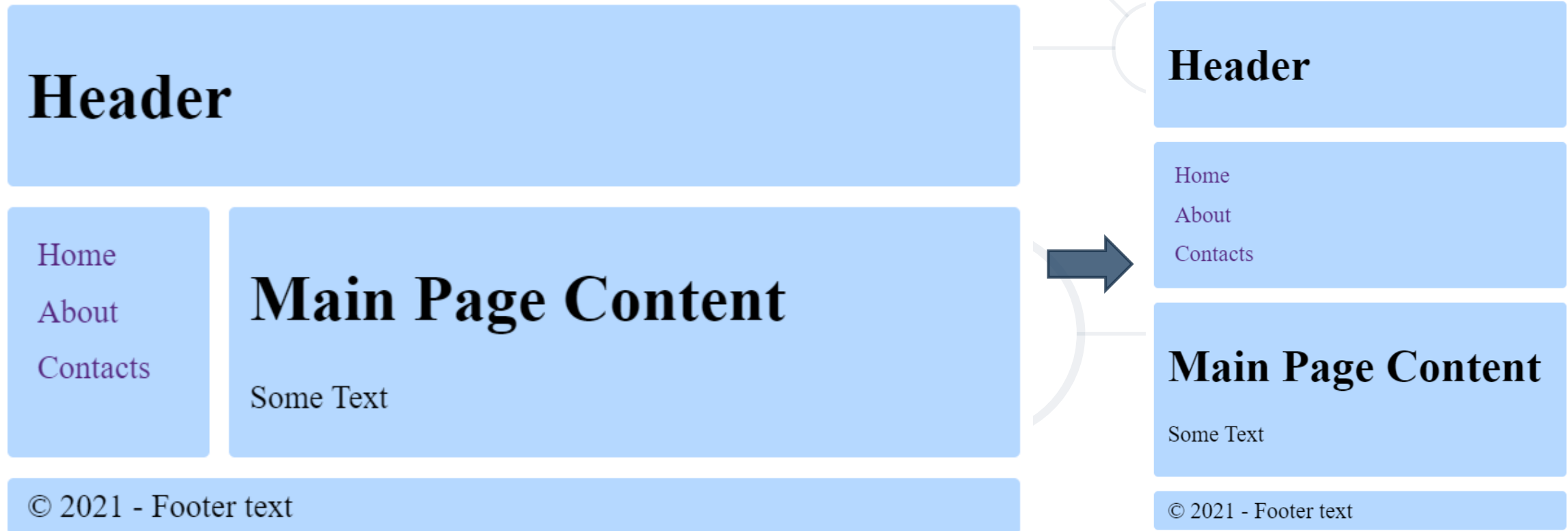
Main Page Content

Some Text

© 2021 - Footer text

Demo: CSS Grid Site Layout

- <https://codepen.io/snakov/pen/MWbxZOy>





Media Queries Conditions

Logical Operators: and | or

```
@media (min-width: 600px) and (max-width: 900px) {  
  .example {  
    /* Styles! */  
  }  
}
```

Screen width between
600px and 900px

```
@media (max-width: 900px), (min-width: 1100px) {  
  .example {  
    /* Styles! */  
  }  
}
```

OR



@import

CSS @Import Rule

- What is **Responsive Web Design**?
- What are **Media Queries**?
- Media **Types**
- Media **Feature Rules**



Questions?



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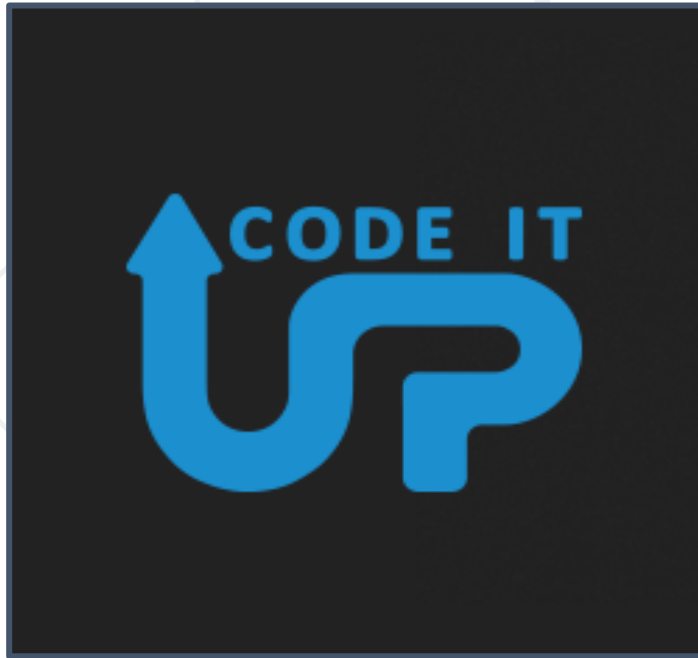


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