

The Mobile Web

Web Engineering

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Computerphile

<https://www.youtube.com/watch?v=88jkB1V6N9w>



Responsive Design

Respond to varying screen sizes/resolutions

Prerequisite Knowledge:

HTML, CSS, JavaScript, Web-MVC

Testing the WebMile

The variety of devices, screen sizes, and resolutions makes any testing difficult.

Provider and products change quickly:
google, microsoft, soucelabs, mobiready, ...

Approaches

Flexible layout (CSS)

Media queries (CSS)

Dynamic in-page logic (HTML, JS)

Serve different views per capability (MVC)

Flexible Layout { float: left; }

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Media Query (CSS)

```
#title { width: 50%; }
```

```
@media screen and (max-width: 800px) {  
    #title { width: 100%; }  
}
```

Media Query Attributes

max-width, max-device-width,
min-width, min-device-width, *(height)*
orientation (portrait, landscape),
[min-,max-,device-]aspect-ratio,
color, resolution, touch-enabled, ...

Dynamic in-page logic

```
<body onresize="adapt()">
```

```
<script>
```

```
    function adapt() { ...; screen.size ... }
```

```
</script>
```

View per Capability

How to detect the capability?

How to change the view?

Request - Response

server

controller

```
class MyController  
  def myAction(en, exam)
```

request

client

view

Grade Calculator

localhost:8080/static/GradeCalculator.html

continuous assessment grade

final exam

Daten absenden

response

How to change the View?

Use different CSS

Select a different layout

Rendering a different view

When to use: rule of thumb

CSS float

Always consider

@media

Mostly static content

onresize

Fine-grained control

MVC

Default