



UX & UI Design

teachers:

Fassina Lorenzo
Marazzita Samuele
Ruscelli Gabriele

slides: **Blackboard**



These slides

These slides are part of the course “**UX & UI Design**”.

The course website with the complete material can be found at learn.naba.it

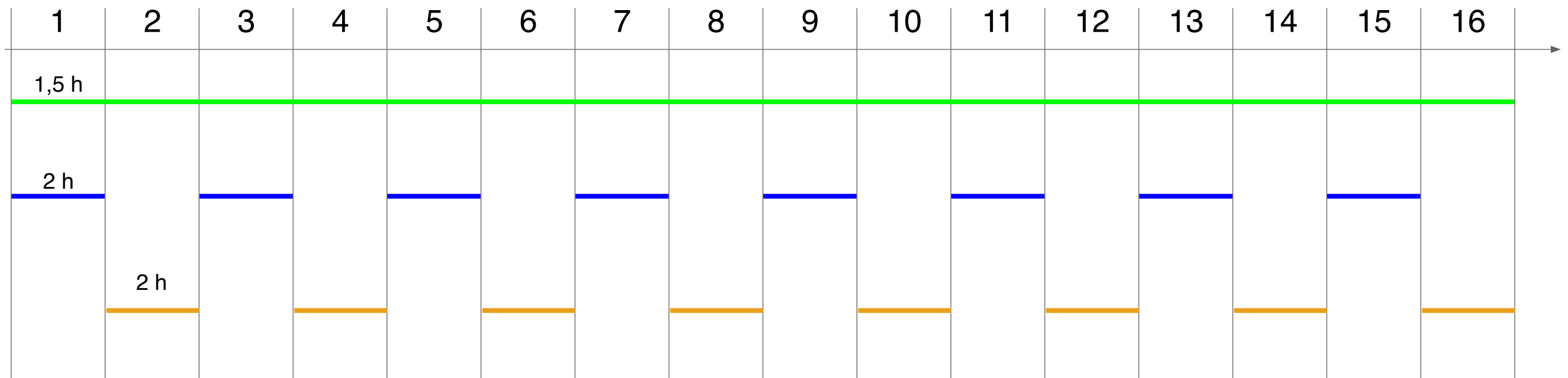
Due to the rapid evolution of the network, the course is updated every year.

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Program



 online hours  class hours subgroup 1  class hours subgroup 2

16 weeks divided into:

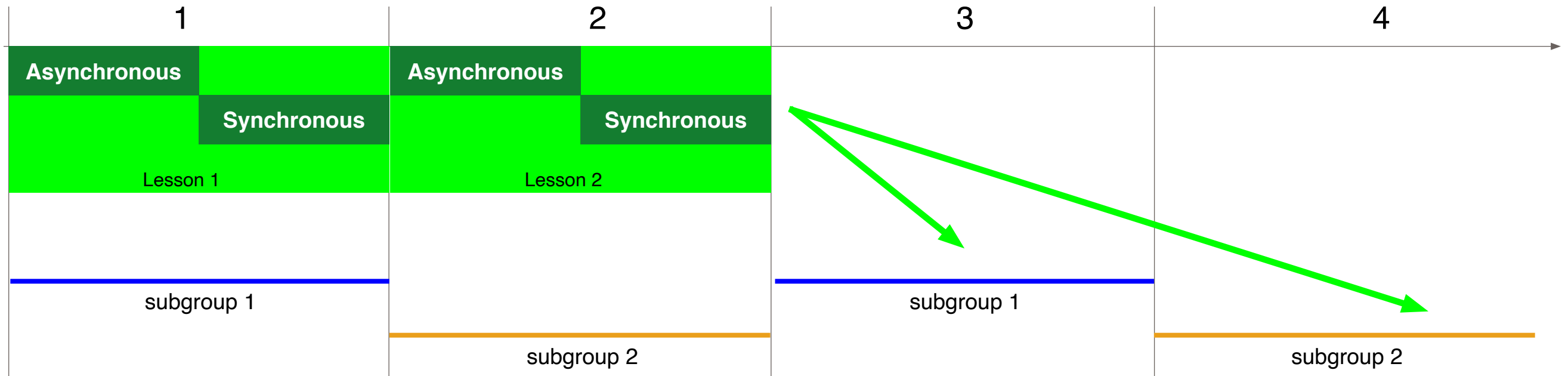
- 16 one-and-a-half hour online lessons involving the whole class.

Example: the entire  group

- 8 lessons in class (offline) for each individual subgroup.

Example: 8 for subgroup  and 8 for subgroup 

Schedule



composed by:

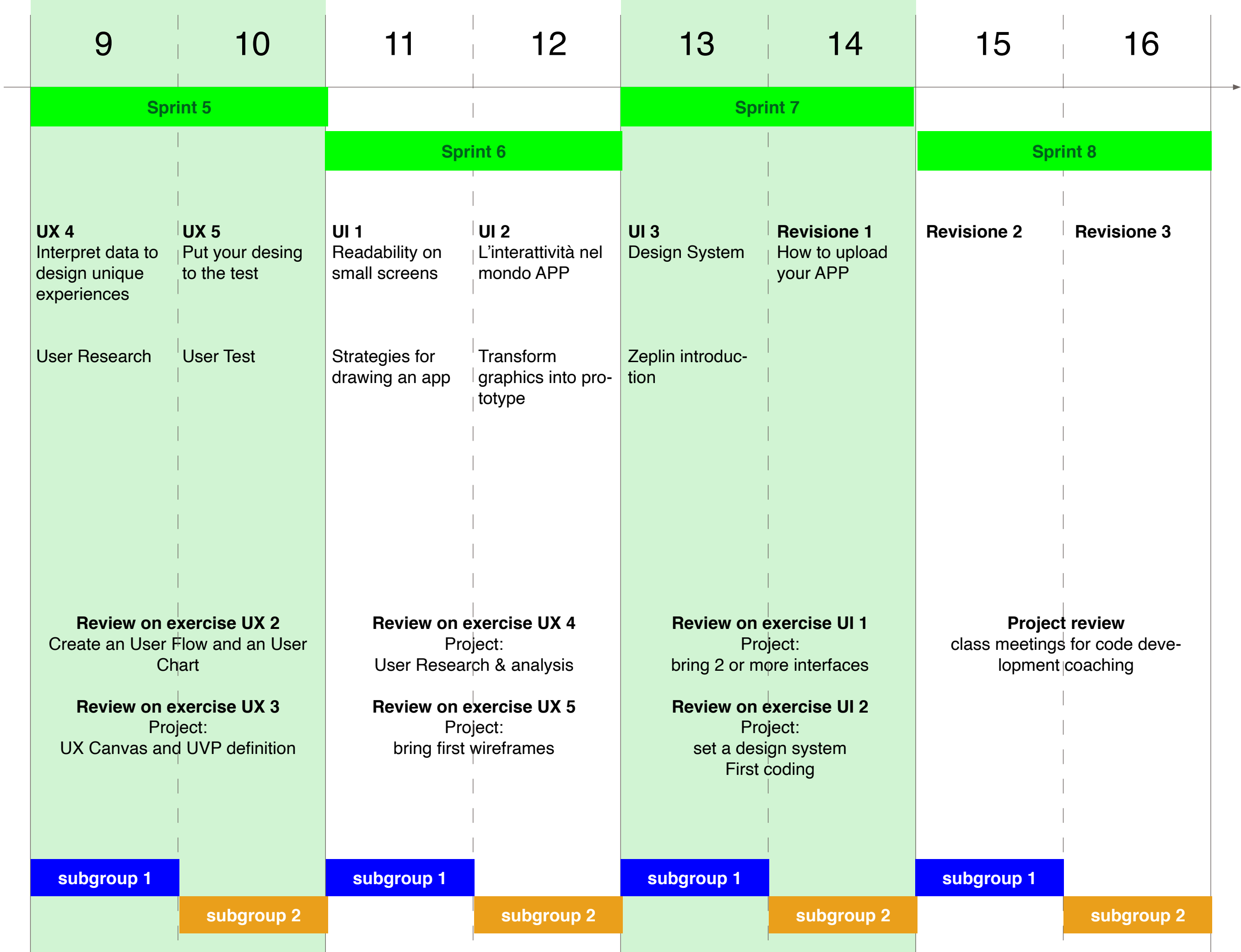
- 2 lessons on line each one divided in:
 - theoretical asynchronous lesson (recorded)
 - synchronous tutorial lesson (on line with teacher)
 - synchronous exercises assignment part

-1 in the presence for each subgroup

During the next sprint, in this example the one involving lesson 3 and 4, the tasks and projects assigned in the previous sprint will be corrected and reviewed.

Each sprint prepares the student through theory, tutorials and assignment of exercises to the next sprint.

1	2	3	4	5	6	7	8
Sprint 1				Sprint 3			
		Sprint 2				Sprint 4	
Web 1 Integrative elements to create a good project	Web 2 Dynamic and surprising effects with the code	Web 3 Manage a responsive layout	Web 4 Interactivity in the web world	Web 5 Integrate complex interactive effects	UX 1 Introduction to the APP world	UX 2 Medotics and tricks to create functional architectics	UX 3 Define your project
CSS3, Form Before & After	Animation Transition	Media Query Viewport	jQuery introduction	jQuery Plugin	Study parameters and contexts	User Flow Flow Chart	Unique Value Proposition
Brief delivery Review exercise		Review on exercise Web 1 CSS3 Review on exercise Web 2 Flower animation		Review on exercise Web 3 Responsive layout Review on exercise Web 4 Cookies bar		Review on exercise Web 5 Carousel & jQuery UI tab Review on exercise UX 1 Define a UX strategy	
subgroup 1		subgroup 1		subgroup 1		subgroup 1	
subgroup 2		subgroup 2		subgroup 2		subgroup 2	



Project

Brief 1/4



The final project consists in creating **a digital app.**

This must be done using HTML/HTML5, CSS3 and jQuery code

Minimum 10 Screens Maximum 20 (Excluding collateral UI: modals, Login, password recovery...)

The evaluation is based on 3 parameters:

- 10 points for UX
- 10 points for UI
- 5 points for presence in all revisions
- 5 points for the final prototyping (code)

On the day of the exam the candidate will connect his smartphone to the projector and present the application in terms of usability, design and functionality.

This is NOT a group project.

Project

Brief 2/4

The app to be developed will be decided by a random extraction of 2 elements that will determine it, following these parameters:

Typology:

- From micromobility to teleportation
- What is mine is “almost yours”...
(sharing economy)
- Dream, reality, fiction
- Food for the mind
- Anxiety and related worlds
- The new beauty (person)
- Digital Adrenaline

Target:

- Baby (2 - 6) or Parents
- Kids 2 (6 - 12)
- Teen (13 - 19)
- Young (28 - 35)
- Adults (36 - 50)
- Senior (50+)

Device:

- Smartphone
- TV
- Tablet
- PC/Laptop
- Console
- Vending machine
- Digital signage

Project

Brief 3/4

What to do?

It will have to be realized all the graphics of the app through Sketch going also to create the prototyping.

A research analysis will have to be presented where it will be reported:

- UI
 - Study of naming and logo
 - Style analysis
 - Style Guide (colors, fonts, icons, graphic elements...)
- UX
 - Abstract of app operation (UVP)
 - Competitors (apps and not)
 - Target analysis
 - User Research and User Flow

Briefly

- App coded in HTML, CSS and jQuery
- UI layouts in Sketch
- Presentation (pdf/keynote)



Project

Brief 4/4



Contents:

all content must be original, or created directly by you or with attribution of the contributor.

OK: unsplash, audio libraries, illustrations made by a friend, thenounproject, Freepik

Project

revisions management

from week 9 to 12

Project formalisation:

The student will bring an initial phase of the app with a UX and UI setting.

Key points:

- architecture

- wireframe

- interfaces

- low fidelity prototype

from week 13 to 16

Start of high fidelity prototyping (code)

The student, after having studied the structure of their app, will try to develop the most complex pages in order to be supported by the teacher.

Key points

- set navigation

- insert external plugins

- upload the app

Software we will use



Design

Sketch

Invision Studio

Adobe XD

Code

Atom/Dreamweaver

/Sublimetext

Display on smartphone:

Android: Full screen browser

iOS: FOO screen

You will be given a web space where you can put your mi-niAPPs online

HTML5

new tags available

INTRODUCTION

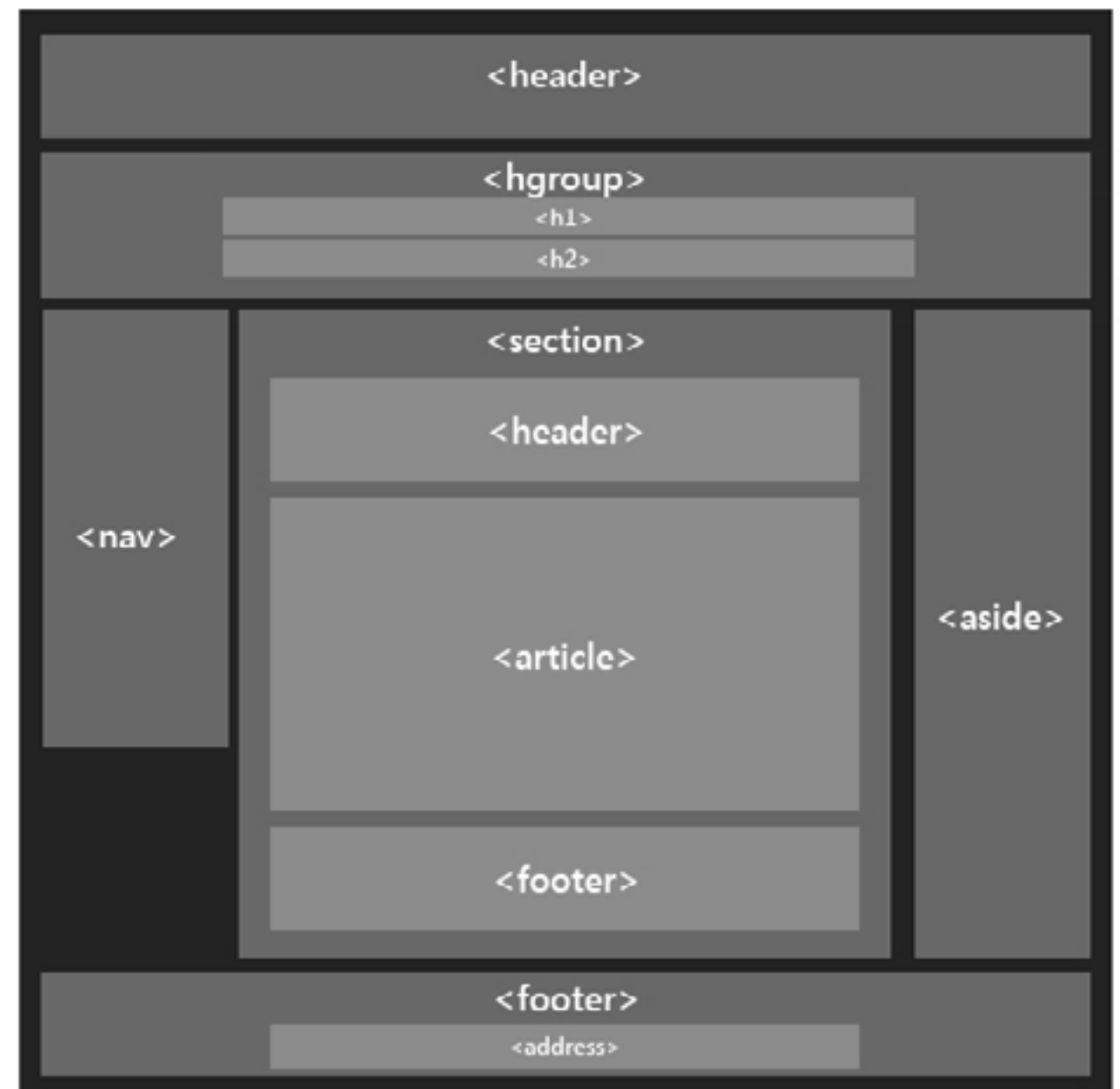
HTML5 is the latest evolution of the standard that defines HTML.

This is a new version of the HTML language, with new **elements, attributes and behaviors.**

KEY ELEMENTS

STRUCTURAL

The definition of the structure of an HTML 4 document is very rough and causes many problems. HTML5 adds precision to the sectioning and header functionality, allowing a predictable document structure used by browsers to improve the user experience.



KEY ELEMENTS

MULTIMEDIAL

Over the years the insertion of multimedia elements such as audio and video has always been a problem and required the use of sophisticated plugins for their correct reading. Fortunately the HTML5 specification has had these features added natively, with the `<video>` and `<audio>` elements.

`<video>` `<audio>`

STRUCTURAL

HEADER

Positioned at the top of the page usually contains the site header and/or company logo

```
<header>  
    
  <a href="#">Link</a>  
</header>
```

STRUCTURAL

NAV

This is where the site navigation menu will be located. Usually it will be placed either in a sidebar or in a header.

```
<nav>  
  <ul>  
    <li>Home</li>  
    <li>Contacts</li>  
  </ul>  
</nav>
```

STRUCTURAL

ASIDE

It is where additional content is placed in addition to the main content and is positioned to the side.

It may contain additional information about the page you are viewing or links to it.

```
<aside>  
  <a href="#">Link 1</a>  
  <a href="#">Link 2</a>  
</aside>
```

STRUCTURAL

SECTION

It represents a generic section of a document, i.e. a thematic group of content, typically with a header.

It replaces the more generic <div>

```
<section>  
  <h1>Section title</h1>  
  <p>Lorem ipsum dolor</p>  
</section>
```

STRUCTURAL

ARTICLE

It represents a self-contained composition in a document, a page, intended to be distributed independently or reuse, for example, in aggregation. Examples are a forum article, a magazine or newspaper article, a blog article, a comment posted by a user, an interactive widget or gadget, or any other independent content.

```
<article>  
  <h4>A really great article</h4>  
  <p>Such fantastic text.</p>  
</article>
```

STRUCTURAL

FOOTER

It represents the footer of its nearest section. A footer usually contains information about the author of the section, copyright or links to related documents.

```
<footer>
```

```
    Copyright or informations  
    of the article
```

```
</footer>
```

MULTIMEDIAL

AUDIO

It is used to incorporate sound content into documents.
It can contain several audio sources, represented using the src attribute or the <source> element; the browser will choose the most suitable one.

```
<audio src="foo.ogg">  
  <track kind="captions" src="foo.en.vtt"  
srclang="en" label="English">  
  <track kind="captions" src="foo.it.vtt"  
srclang="it" label="Italiano">  
</audio>
```

MULTIMEDIAL

VIDEO

It incorporates a media player that supports video playback in the document.

```
<video controls width="250">  
  <source src="/media/cc0-videos/  
flower.webm" type="video/webm">  
  <source src="/media/cc0-videos/  
flower.mp4" type="video/mp4">  
</video>
```


Before & After

Useful tricks to manage particular situations

INTRODUCTION

The pseudoelements `::before` and `::after` in CSS allows us to insert content into a page without having to insert it into HTML. While the final result is not actually in the DOM, it appears on the page as if it were.

CSS	<pre>div::before { content: "before"; } div::after { content: "after"; }</pre>
HTML	<pre><div> before <!-- The actual HTML content of the div --> after </div></pre>

DOM: Document Object Model, represents the structure in which each web page is organized.

DIFFERENCES

::before

The content is generated
before the HTML content
of the element.

```
div::before {  
  content: "before";  
}
```

```
<div>  
  ::before  
  <!-- div's HTML  
content -->  
</div>
```

::after

The content is generated
after the HTML content
of the element.

```
div::after {  
  content: "after";  
}
```

```
<div>  
  <!-- div's HTML  
content -->  
  ::after  
</div>
```

CSS

HTML

CONTENTS

To display a `::before` and `::after` element it is **mandatory** to define a content

text

image

CSS

```
div::before {  
  content: "your text";  
}
```

```
div::after {  
  content: url(icon.png);  
}
```

HTML

```
<div>  
  ::before  
  <!-- div's HTML  
content -->  
</div>
```

```
<div>  
  <!-- div's HTML  
content -->  
  ::after  
</div>
```

CONTENTS

You can also generate an element with empty content and manipulate it like an html tag.

CSS

```
div::before {  
  content: "";  
  display: block;  
  width: 100px;  
  height: 100px;  
  background: red;  
}
```

HTML

```
<div>  
  ::before  
  <!-- div's HTML  
content -->  
</div>
```

css3

new styles and formats

INTRODUCTION

CSS3 is the new version of CSS that allows all designers to implement effects, give animations and create new formats.

Unfortunately, their compatibility is not yet universal, however, modern browsers do not create any effects.

The developers are therefore encouraged to create new effects in order to make websites faster and more accessible.

SUPPORT

http://www.w3schools.com/cssref/css3_browser-support.asp

<http://caniuse.com>



PREFIXES

For the implementation of CSS3 we need to insert prefixes for full compatibility between all browsers.

CSS1 / CSS2

```
div{  
    font-size: 32px;  
}
```

CSS3

```
div{  
    border-radius: 10px;  
    -moz-border-radius: 10px;  
    -webkit-border-radius: 10px;  
    -o-border-radius: 10px;  
    -ms-border-radius: 10px;  
}
```

MAINS

The main CSS3 can be divided into several areas:

style and color

transform

animations

responsive

border-radius
box-shadow
text-shadow
rgba
..

rotate
skew
scale
translate

transition
animation

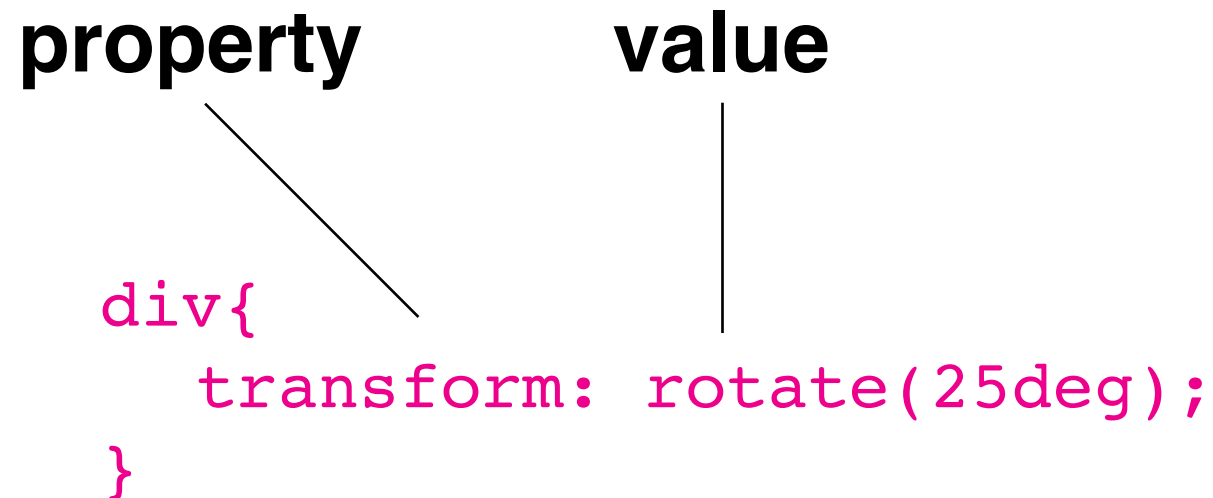
media query
flexbox
viewport

TRANSFORM

The instruction to use is called “transform” to it you identify the type of property to use, then you enter the value.

property

value



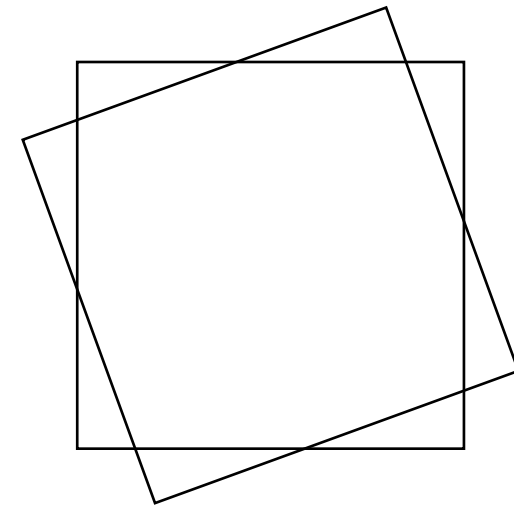
div{
 transform: rotate(25deg);
}

The diagram illustrates the mapping of the terms 'property' and 'value' to a CSS code snippet. A diagonal line connects the word 'property' to the 'transform' property in the code. A vertical line connects the word 'value' to the 'rotate(25deg)' value in the code.

TRANSFORM

Rotate

```
transform: rotate(25deg);  
transform: rotateX(25deg);  
transform: rotateY(25deg);  
transform: rotateZ(25deg);  
transform: rotate3d(25deg);
```



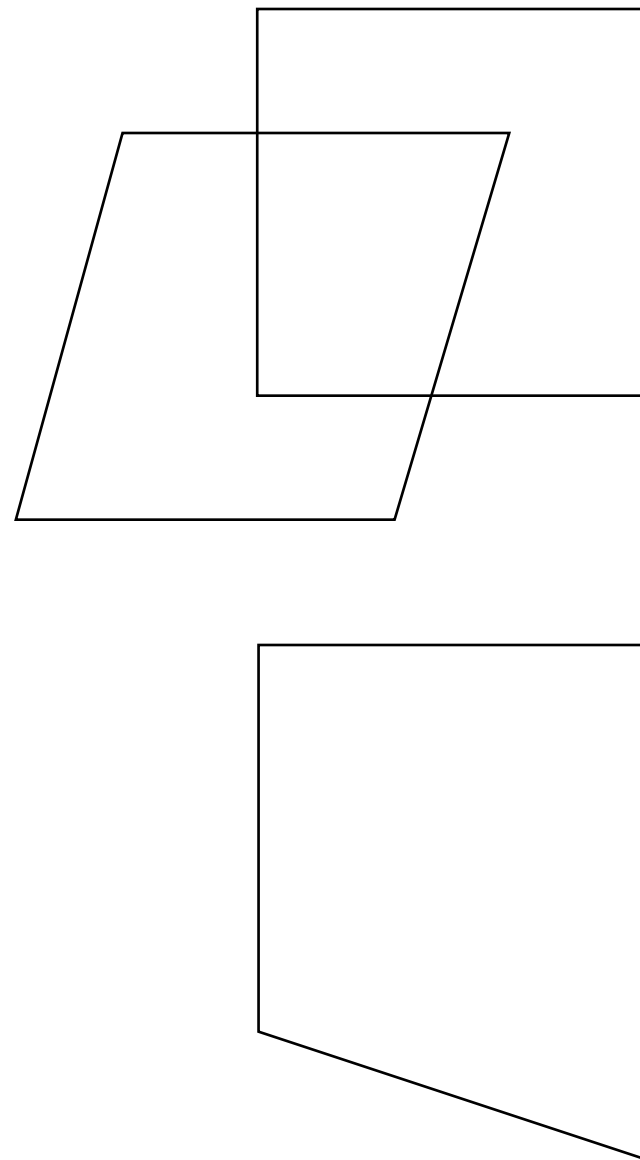
NB

```
transform-origin: XXXX;
```

TRANSFORM

Skew

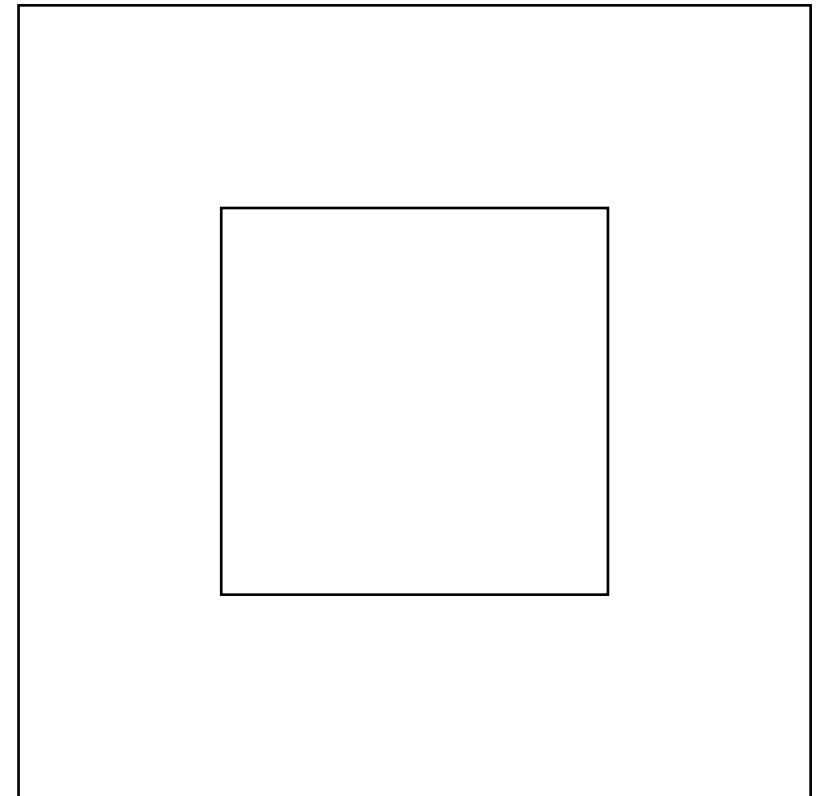
```
transform: skew(20deg);  
transform: skewX(20deg);  
transform: skewY(20deg);
```



TRANSFORM

Scale

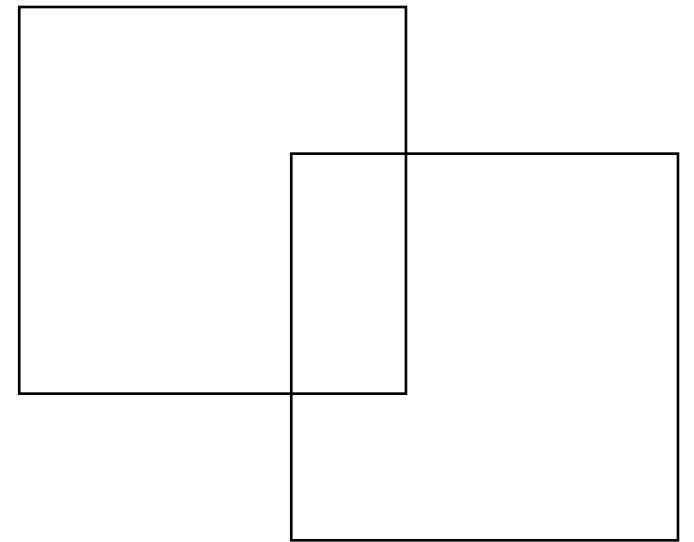
```
transform: scale(2);  
transform: scaleX(2);  
transform: scaleY(2);  
transform: scaleZ(2);  
transform: scale3d(2);
```



TRANSFORM

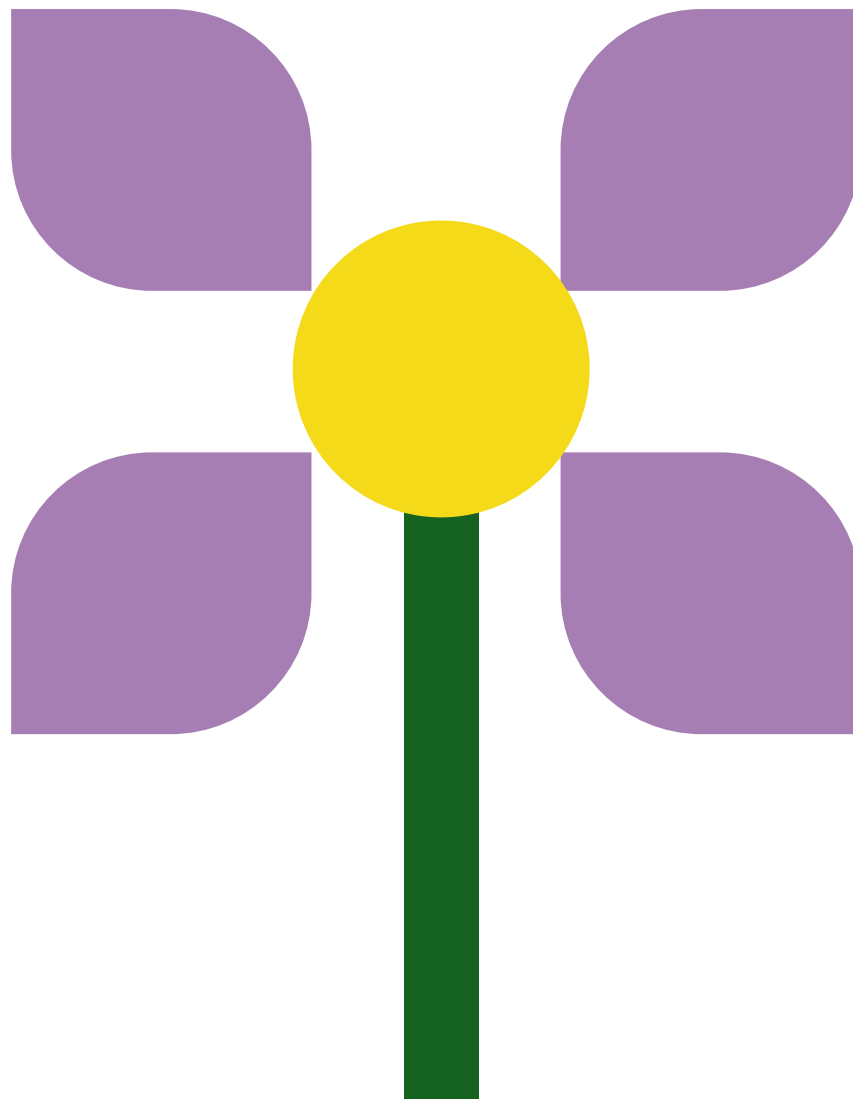
Translate

```
transform: translate(20px);  
transform: translateX(20px);  
transform: translateY(20px);  
transform: translateZ(20px);  
transform: translate3d(20px);
```



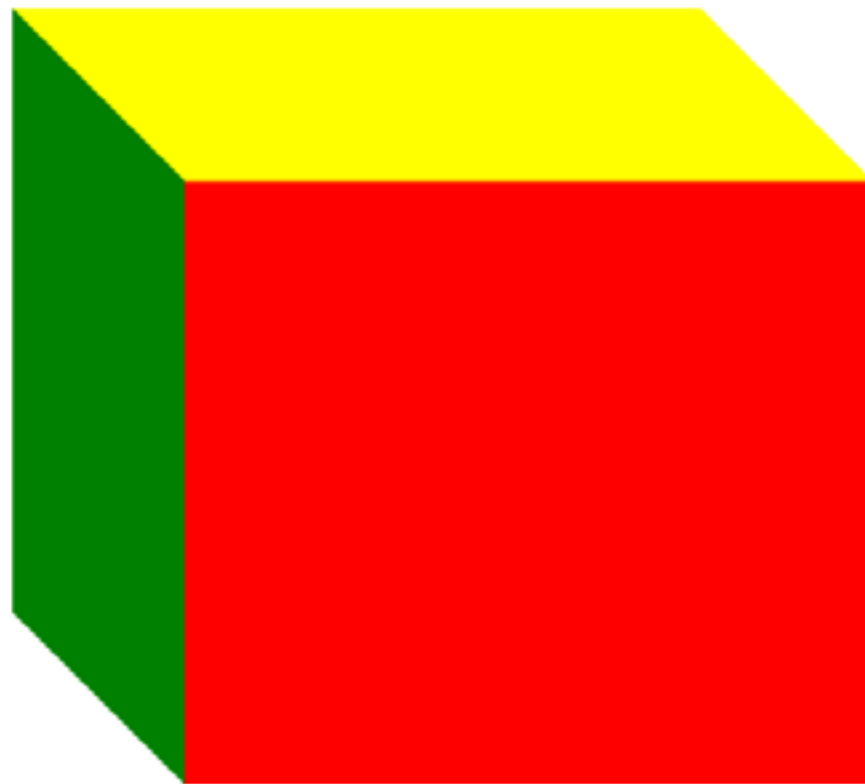
Exercise

Given the following image recreate it in CSS3



Exercise

Given the following image recreate it in CSS3



Form

Main interaction elements

Introduction

Among the various elements of HTML, great importance are the forms that represent the meeting point with the user offering an interactive way to send data.

PAYMENT DETAILS

NAME ON CARD

Daniel Hecker

CARD NUMBER

4534 5555 5555 5555

CVV VALID THROUGH

453 06/19

PAYMENT

PAYMENT DETAILS

NAME ON CARD

Daniel Hecker

CARD NUMBER

4534 5555 5555 5555

CVV VALID THROUGH

453 06/19

PAYMENT

Input type

```
<input type="button">  
<input type="checkbox">  
<input type="color">  
<input type="date">  
<input type="datetime-local">  
<input type="email">  
<input type="file">  
<input type="hidden">  
<input type="image">  
<input type="month">  
<input type="number">
```

```
<input type="password">  
<input type="radio">  
<input type="range">  
<input type="reset">  
<input type="search">  
<input type="submit">  
<input type="tel">  
<input type="text">  
<input type="time">  
<input type="url">  
<input type="week">
```

Text

Password

Email Address

Number

Search

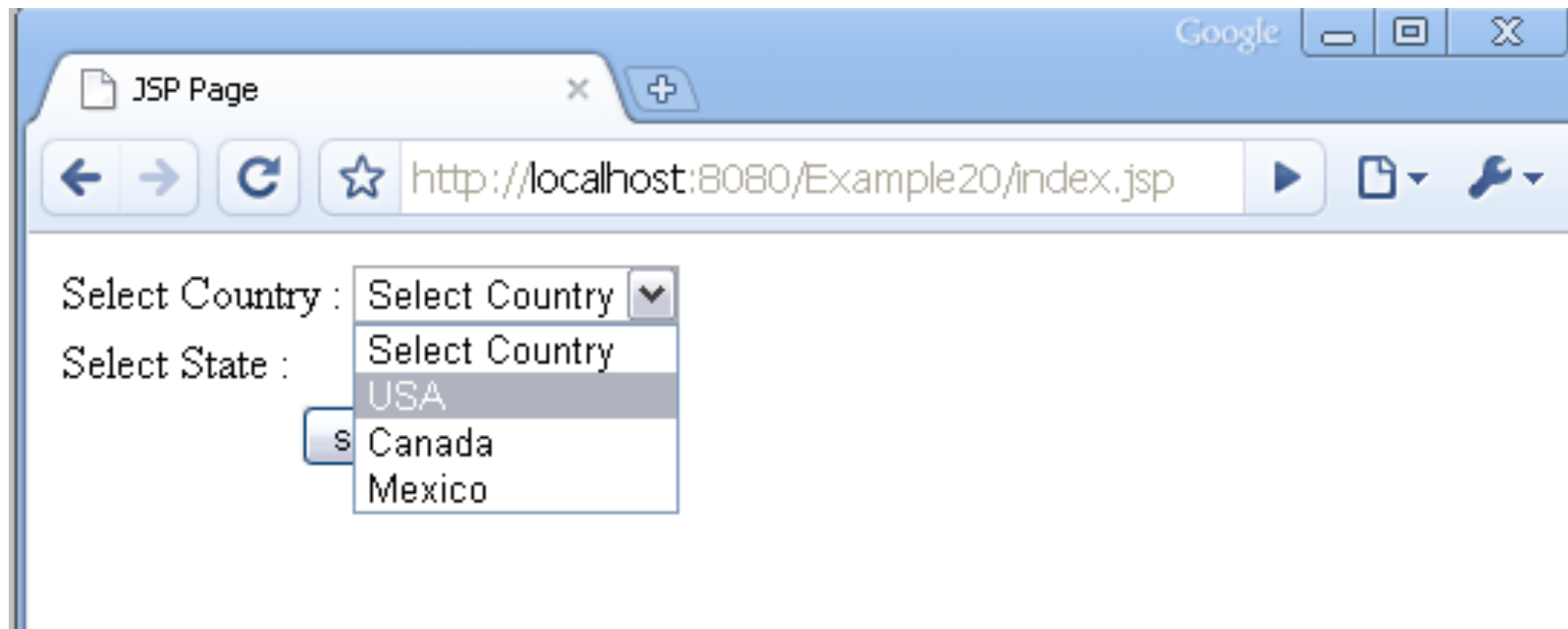
URL Address

mm/dd/yyyy

Week --, ----

Select

```
<select>
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="mercedes">Mercedes</option>
  <option value="audi">Audi</option>
</select>
```



Label

```
<label for="cars">Choose a car:</label>
```

```
<select>
```

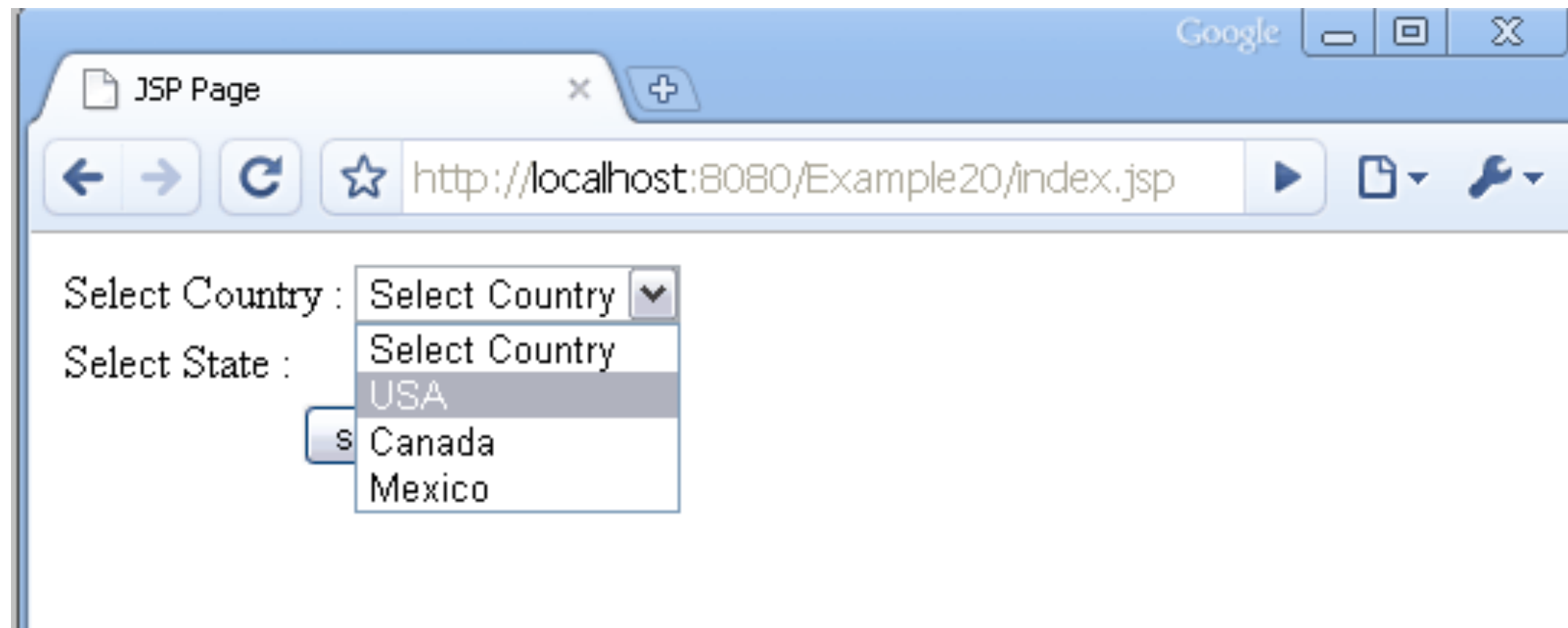
```
  <option value="volvo">Volvo</option>
```

```
  <option value="saab">Saab</option>
```

```
  <option value="mercedes">Mercedes</option>
```

```
  <option value="audi">Audi</option>
```

```
</select>
```



TextArea

```
<label>Feedback:</label>
```

```
<textarea>
```

```
Type something here
```

```
</textarea>
```

Feedback:

Type something here...

Complete form

```
<form>
  <label>Name</label>
  <input type="text">

  <label>Choose a course</label>
  <select>
    <option value="graphic">Graphic</option>
    <option value="design">Design</option>
    <option value="fashion">Fashion</option>
  </select>

  <label>Your biogrphy</label>
  <textarea>
    write here
  </textarea>

  <button>send</button>
</form>
```


CSS reset rule

```
form input,  
form select,  
form textarea,  
form label,  
form button  
{  
    font-family: inherit;  
    color: inherit;  
    border: none;  
    border-radius: 0;  
    display: block;  
    width: 100%;  
    padding: 0;  
    margin: 0;  
    -webkit-appearance: none;  
    -moz-appearance: none;  
}
```