Multimedia im Netz
Online Multimedia
Winter semester 2015/16

Tutorial 08 – Minor Subject

Today's Agenda

- Evaluation Results

- Quick Test

- Breakout Session: Assignment 07

- Advanced jQuery

  – Handy methods

  – Effects

- Breakout

  – Spotify search extensions

  – More functions: Images, links, search for tracks, etc.

- Round-up

Evaluation

Results & Discussion

Participants / Respondents

- N = 48
  - Major subject: 42
  - Minor subject: 6
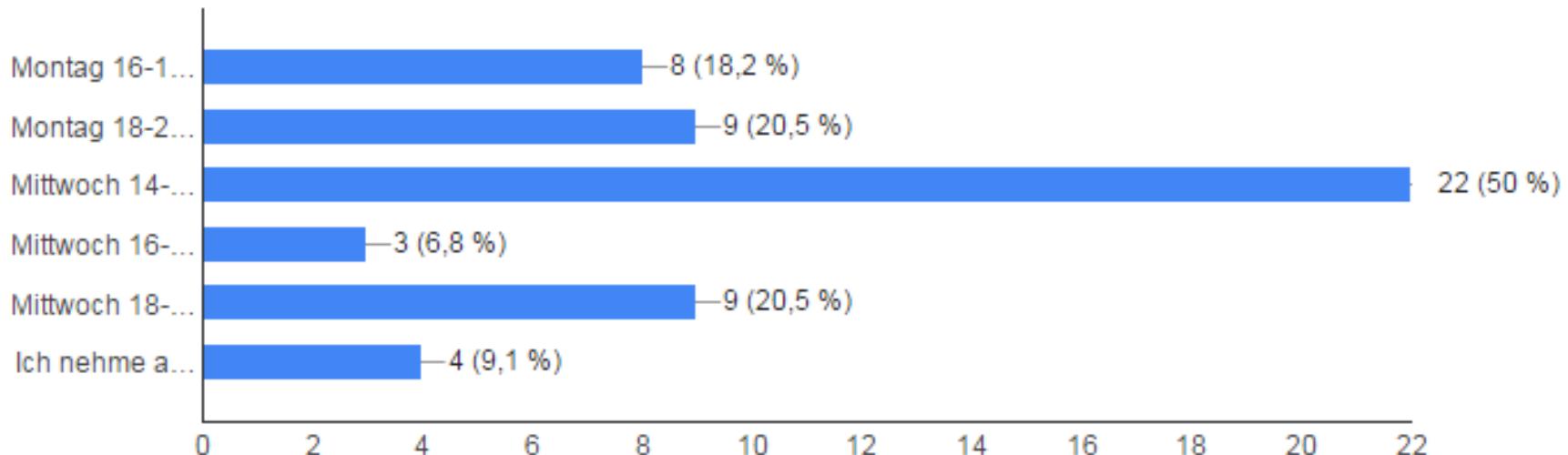
Main reasons for not participating or not submitting the assignments

n

No time	Too hard	Other Obligations	Too much	Too fast
20	8	8	6	4
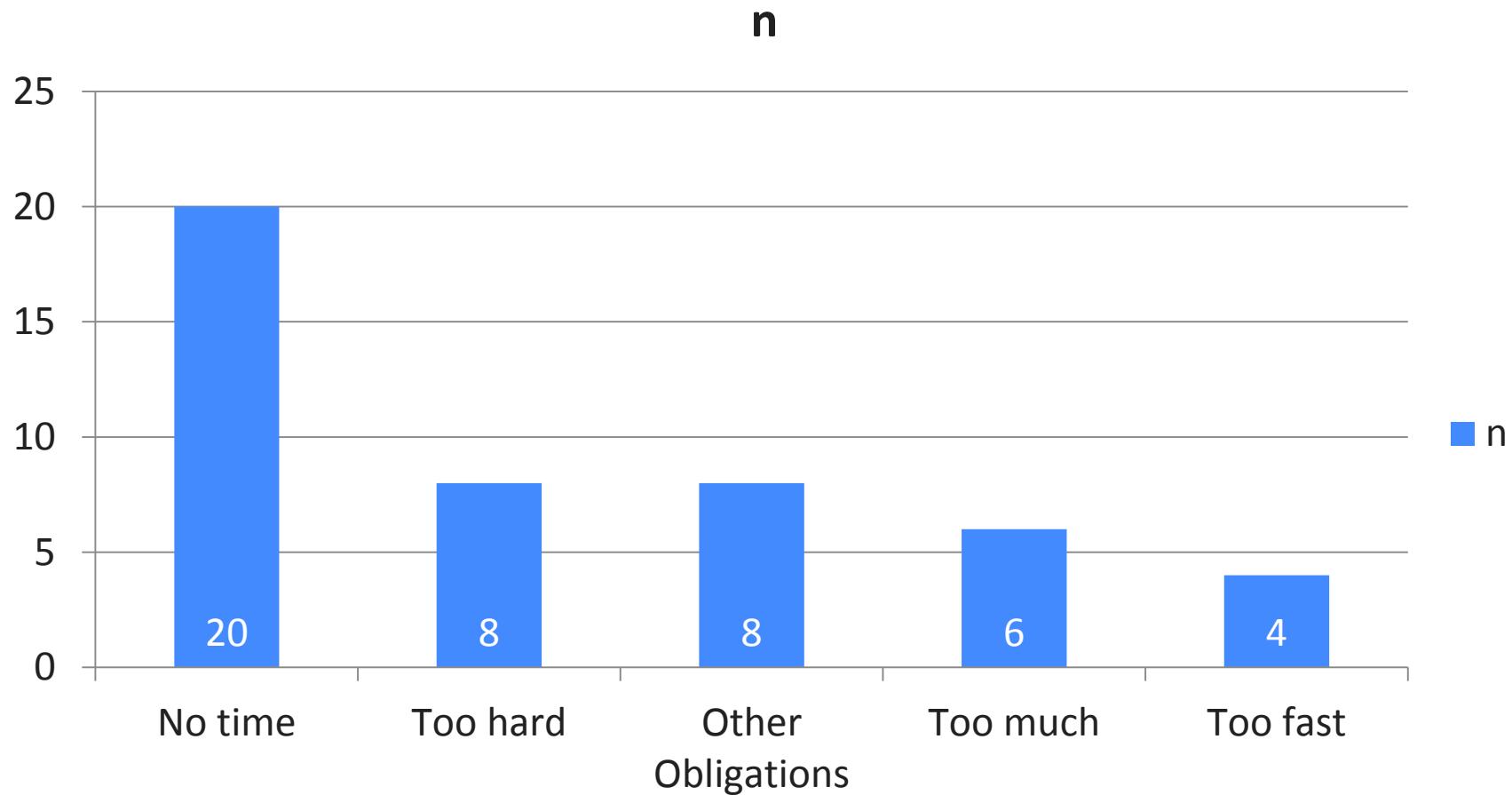
Amount of Work

- „Aufgaben brauchen oft viel Zeit, mindestens 6-8 Stunden, wenn alles bearbeitet werden soll"
    - http://ec.europa.eu/education/tools/docs/ects-guide_de.pdf, page 11
    - Approx. 30 working hours per ECTS credit
    - Quick calculation: 6 ECTS $\rightarrow$ 6 * 30h = 180 working hours per semester
        - 14*3 = 42 hours for lecture
        - 13*3 = 39 hours for tutorials

            $\rightarrow$ 99 hours for assignments

            $\rightarrow$ 99h / 13 assignments = 7.6 working hours per assignment.

See a summary of all responses:
https://goo.gl/qn3HwO

Code-Along: Assignment 07
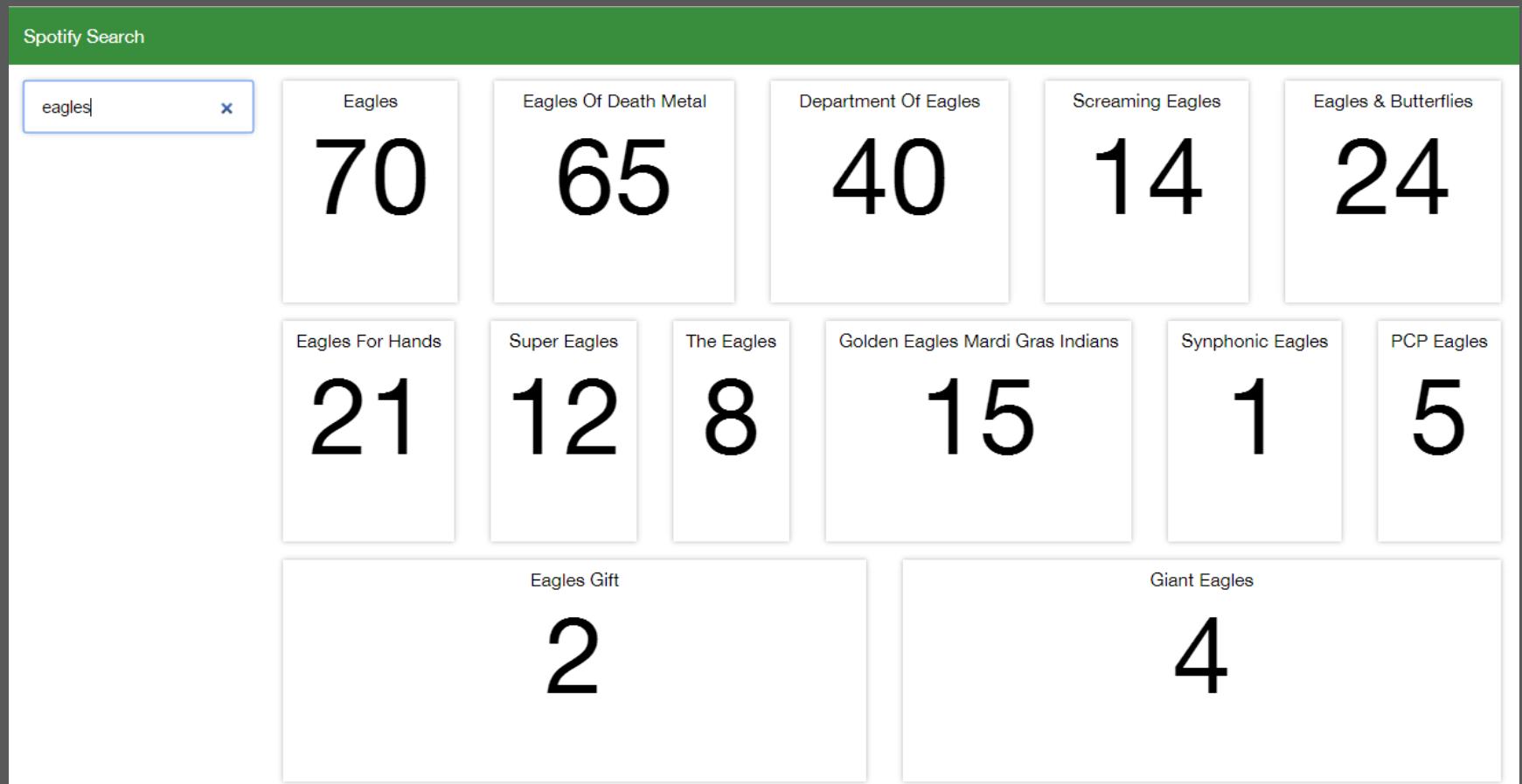
Advanced jQuery

Method Chaining

- Basically, any jQuery method returns another jQuery object, that you can now work with.

- (Possible) Advantages: readability, re-use of selection results

- Examples:

```
$("#myDiv").removeClass("off").addClass("on");
```

```
$("#myDiv")
        .css("color", "#cccccc")
        .removeClass("container")
        .attr("id", "someNewID")
        .append("<span>Text</span>");
```

Efficient DOM-Traversal

- Traverse the DOM tree with CSS selectors and jQuery methods

- Useful to select and edit elements efficiently.

- Examples:
  - `$("#myDiv").next("div")`
    gets the first `div`-element that follows the elemtent with ID `myDiv`

  - `$("ul").find("li.item")`
    finds all `li`–elements having the class `item` withing all `ul`-elements

  - More Examples: http://api.jquery.com/category/Traversing/

$.each()

- „for-loop shortcut"

```javascript
$.each(collection,function(index,item){
    // ...
});

// is equivalent to:

for(var i=0;i<collection.size();i++){
    var item = collection.get(i);
}
```

$(document).ready()

- $(**document**).ready(*onLoadCallback*) ensures that the DOM has been loaded entirely and that you can access any element inside it.

- Once the DOM is loaded, the callback is fired

```
$(document).ready(function(){
    //JavaScript-Code
});
```

Effects

- jQuery has a few short-hand methods to animate elements.

- Most notably:
  - `.fadeIn(…)`
    run a fade-in animation (appear)
  - `.fadeOut(…)`
    run a fade-out animation, the target will have display:none afterwards
  - `.fadeToggle(…)`
    Either fades in or fades out the element.
  - `.animate(…)`
    Generic animations of CSS properties

- Read more about the effects here:
  https://api.jquery.com/category/effects/

Effects: Examples

```
<script>
    var animatedDiv = $('#animated');
    var fadedDiv = $('#faded');
    var targets= fadedDiv.find('.target');

    fadedDiv.click(function(){
        targets.fadeToggle();
    });

    $('#size').click(function(){
        var randomSize = (Math.random()*100)+'%';
        animatedDiv.animate({
            width: randomSize,
            height: randomSize
        });
    });
</script>
```

Animation Callbacks

- You can also pass a function that will be called when the animation has finished.

- This is useful to create a sequence of animations.

- Example for a perpetual animation:

```html
<div id="inOut">Bling bling</div>
<script>
function appear(){
    $('#inOut').fadeOut(disappear);
}
function disappear(){
    $('#inOut').fadeIn(appear);
}

$(document).ready(disappear);
</script>
```

Break-Out: Extending the Spotify Search

https://www.youtube.com/watch?v=rJaZQ7tjLp0
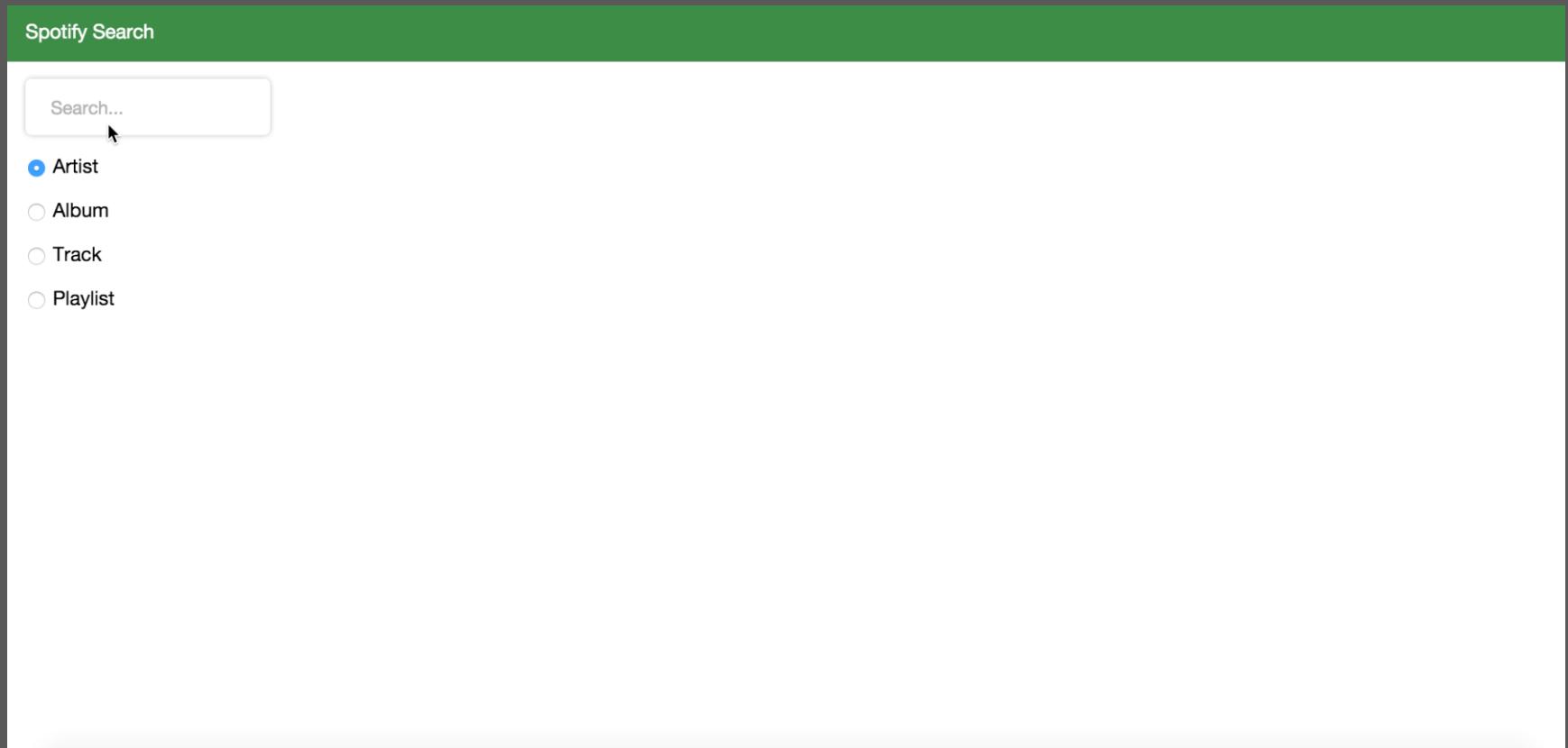
Round-up

1. When and why do we often need `$(`**`document`**`).ready(…);`?

2. How do we find out if an animation is complete?

3. Name one advantage of method chaining.

4. Write down one thing that you've learned today and explain it to your neighbor.

Thanks!

What are your questions?