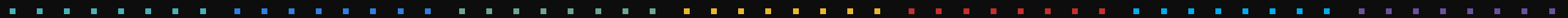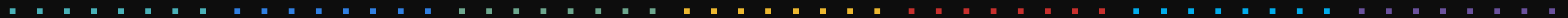# JavaScript #7

Forms

ΠΕΡΙΕΧΟΜΕΝΑ

Περιεχόμενα

- Form elements
  - Accessing forms / elements
  - Text/Password fields
  - Checkboxes
  - Radio buttons
  - Buttons
- Simple checks / validation
- Useful Events
  - **change**
  - **blur** / **focus**
  - **submit**

FORM ELEMENTS

Form elements

Accessing forms

There is a special **HTMLCollection** just for **HTMLFormElement** items

```
document.theForm;                       // by 'name'
document.forms.theForm;                 // by 'id' or 'name'
document.forms[0];                      // by index

// When the name has no valid characters
document.forms['the-form']              // by 'id' or 'name'

// The following is still valid
document.getElementById('theForm'); // by 'id'
```

Form elements

Accessing form elements

```javascript
const theForm = document.theForm;

theForm.elements.firstName;          // by 'id' or 'name'
theForm.firstName;                   // by 'id' or 'name'

// When the name has no valid characters
theForm.elements['first-name'];      // by 'id' or 'name'

// or maybe by
document.forms['the-form']['first-name'];
```

Form elements

Text/Password fields

```html
<form id="login-form" name="login-form">
  <label for="username">User name:</label>
  <input type="text" id="username" name="username">
  <label for="password">Password:</label>
  <input type="password" id="password" name="password">
</form>
```

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Form elements

Text/Password fields

Getting/setting the value from/to a text field

```javascript
const username = document.forms['login-form'].elements['username'];
console.log(username.value);

username.value = '';
console.log(username.value);
```

Form elements

Radio Buttons

```html
<form id="genders" name="genders">
  <input type="radio" id="gender-male" name="gender" value="male" checked>
  <label for="gender-male">Male</label>
  <input type="radio" id="gender-female" name="gender" value="female">
  <label for="gender-female">Female</label>
  <input type="radio" id="gender-other" name="gender" value="other">
  <label for="gender-other">Other</label>
</form>
```

Radio Buttons

Getting the value of the selected radio button

```javascript
const other = document.forms.genders.elements['gender-other'];
console.log(other.checked);
other.checked = true;

const gender = document.forms.genders.elements['gender'];
console.log(gender);   // RadioNodeList
console.log(gender.value);
```

Form elements

Checkboxes

```html
<form id="hobbies" name="hobbies">
  <input type="checkbox" id="basketball" name="sports" value="basketball">
  <label for="basketball">Basketball</label>
  <input type="checkbox" id="football" name="sports" value="football">
  <label for="football">Football</label>

  <input type="checkbox" id="consent" name="consent" value="consent">
  <label for="consent">Consent</label>
</form>
```

Checkboxes

Getting the values of the selected checkboxes

```javascript
const form = document.forms['hobbies'];
console.log(form.elements['sports']);          // RadioNodeList
console.log(form.elements['sports'].value);

// ES6
const values = Array
  .from(document.querySelectorAll('input[name="sports"][type="checkbox"]'))
  .filter((checkbox) => checkbox.checked)
  .map((checkbox) => checkbox.value);

console.log(values);

console.log(form.elements['consent'].value);
console.log(form.elements['consent'].checked);
```

Form elements

Form elements

Buttons

```html
<form>
  <input type="button" value="Click">

  <button type="button">Click</button>
  <button type="submit">Submit</button>
  <button type="reset">Reset</button>
</form>
```

SIMPLE CHECKS / VALIDATION

Simple checks / validation

Checking for empty

```javascript
const userName = document.getElementById('user-name');

if (userName.value === "") {
  alert('User name missing');
}

// Better yet

if (userName.value.trim().length === 0) {
  alert('User name missing');
}
```

Simple checks / validation

Checking for number

```javascript
const age = document.getElementById('age');

if (isNaN(age.value)) {
  alert('Age missing');
}
```
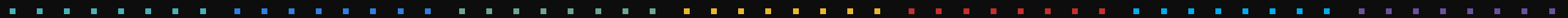
Simple checks / validation

Checking for email (trivial)

```javascript
const email = document.getElementById('email');

if (email.value.trim().length === 0) {
  alert('Email missing');
} else if (email.value.indexOf('@') < 0) {
  alert('Invalid email address');
}
```

USEFUL EVENTS

on change

Useful Events

```javascript
const age = document.getElementById('age');

function checkAge(event) {
  const el = event.target;

  if (isNaN(el.value)) {
    alert('Age missing');
  }
}
age.addEventListener('change', checkAge);
```

Useful Events

on blur

```javascript
const email = document.getElementById('email');

function checkEmail(event) {
  const el = event.target;

  if (el.value === "") {
    alert('Email missing');
  } else if (el.value.indexOf('@') < 0) {
    alert('Wrong email value');
  }
}
email.addEventListener('blur', checkEmail);
```

on **focus**

```javascript
const els = document.querySelectorAll('input[type="text"]');

els.forEach((el) => {    // or with a for ... of etc.
  el.addEventListener('focus', (event) => {
    event.target.classList.remove('error');
  });
});
```

Useful Events

Useful Events

```html
<form name="theForm">
  <fieldset>
    <legend>Personal information:</legend>
    <label for="">First name:</label>
    <input type="text" name="firstname" value="Mickey">
    <label for="">Last name:</label>
    <input type="text" name="lastname" value="Mouse">
    <input type="submit" value="Submit">
  </fieldset>
</form>
```

on **submit**

Useful Events

```javascript
document.theForm.addEventListener('submit', (event) => {
  const form = event.target;

  const firstname = form.elements["firstname"];
  const lastname = form.elements["lastname"];

  if (firstname.value.trim().length === 0) {
    firstname.classList.add('error');
    event.preventDefault();
    return false;
  }

  if (lastname.value.trim().length === 0) {
    lastname.classList.add('error');
    event.preventDefault();
    return false;
  }
});
```

EVENT METHODS

Event methods

preventDefault()

Η μέθοδος **preventDefault()** σταματά την default λειτουργία ενός συμβάντος, για παράδειγμα την αλλαγή σελίδας στο **click** μιας ετικέτας **a** ή στο **submit** μιας φόρμας.

```
event.preventDefault();
```

Event methods

stopPropagation()

Η μέθοδος **stopPropagation()** σταματά την περαιτέρω διάδοση ενός συμβάντος, για παράδειγμα το **click** εντός στοιχείου στο γονέα του.

```
event.stopPropagation();
```

HOMEWORK

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Homework

Todos list

1. Ανοίξτε το app σε αυτή τη διεύθυνση.

2. Συμπληρώστε τον κώδικα, σύμφωνα με τις οδηγίες, ώστε η εφαρμογή να είναι λειτουργική.

3. *Προαιρετικά*, προσθέστε ένα κουμπί & τον απαραίτητο συνοδευτικό κώδικα, για τον καθαρισμό της λίστας.
   Το κουμπί αυτό θα χρειαστεί να καλεί την μέθοδο **ul.textContent = '';**.

Χρήσιμα links

🔊 Web forms — Working with user data - Learn web development | MDN
https://developer.mozilla.org/en-US/docs/Learn/Forms

💥 Forms, controls
https://javascript.info/forms-controls

🔊 Event.preventDefault() - Web APIs | MDN
https://developer.mozilla.org/en-US/docs/Web/API/E…

🔊 Event.stopPropagation() - Web APIs | MDN
https://developer.mozilla.org/en-US/docs/Web/API/E…

Extra info

JavaScript Form Validation
https://www.w3schools.com/js/js_validation.asp

Client-side form validation - Learn web development | MDN
https://developer.mozilla.org/en-US/docs/Learn/Form…

HTML5 Form Validation Examples < HTML | The Art of Web
https://www.the-art-of-web.com/html/html5-form-vali…

THANK YOU!