

# CS472: Web Programming Geolocation & WebStorage

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# Geolocation API

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► The user's location can be requested using the geolocation API. Location data is provided in the form of longitude and latitude points. Browsers determine locations by:

- IP address
- Wireless network connection
- Cell towers
- GPS hardware



# Using geolocation API

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```
getCurrentPosition (success (Position) ,  
fail (PositionError) ) ;
```

- Position.coords.latitude
- Position.coords.longitude
- Position.coords.altitude
- Position.coords.speed
- PositionError.code
- PositionError.message





# Geolocation Example

---

```
navigator.geolocation.getCurrentPosition(success  
, fail);
```

```
function success(position) {  
    console.log('Longitude:' +  
        position.coords.longitude );  
    console.log('Latitude:' +  
        position.coords.latitude );  
}
```

```
function fail(msg) {  
    console.log(msg.code + msg.message); // Log  
        the error  
}
```



# localStorage and sessionStorage

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## ► Problems with cookies:

- Not able to hold much data
- Sent to the server every time you request a page from the domain
- Not secure

## ► The Storage API

- In Storage object browsers store 5MB of data per domain
- Data is stored in key/value pairs
- To protect the information browsers employ same origin policy



# Storage API

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## ▶ Methods

- ▶ `setItem(key, value)`
- ▶ `getItem(key)`
- ▶ `removeItem(key)`
- ▶ `clear()`

## ▶ Property

- ▶ `length`— number of keys

We can also use the Storage object directly:

```
localStorage.name = 'Tina'; //Store information  
var name = localStorage.name; // Access  
information  
var items = localStorage.length; // 1
```





# Web Storage API Example

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Name

Answer

Save

```
<form id="application" action="#">
  <label for="username">Name</label>
  <input type="text" id="username" name="username" />
  <br/>
  <label for="answer">Answer</label>
  <textarea id="answer" name="answer"></textarea>
  <input type="submit" value="Save" />
</form>
```

---



# Using Web Storage API

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```
var txtUsername = document.getElementById('username'); // Get form  
    elements
```

```
var txtAnswer = document.getElementById('answer');
```

```
txtUsername.value = localStorage.getItem('username'); // by  
    localStorage
```

```
txtAnswer.value = localStorage.getItem('answer');
```

```
txtUsername.value = sessionStorage.getItem('username'); // by  
    sessionStorage
```

```
txtAnswer.value = sessionStorage.getItem('answer');
```

```
txtUsername.addEventListener('input', function() { //Data saved on  
    keyUp
```

```
    localStorage.setItem('username', txtUsername.value);
```

```
    sessionStorage.setItem('username', txtUsername.value);
```

```
}, false);
```

```
txtAnswer.addEventListener('input', function() { // Data saved on  
    keyUp
```

```
    localStorage.setItem('answer', txtAnswer.value);
```

```
    sessionStorage.setItem('answer', txtAnswer.value);
```

```
}, false);
```

# CONNECTING THE PARTS OF KNOWLEDGE WITH THE WHOLENESS OF KNOWLEDGE

## *JavaScript Events, Ajax and Advanced techniques*

1. Client side programming with JavaScript is useful for making web applications highly responsive.
  2. Ajax allows JavaScript to access the server in a very efficient manner using asynchronous messaging and partial page refreshing.
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3. **Transcendental consciousness** is the experience of the home of all the laws of nature where all information is available at every point. MAIN POINTS
  4. **Impulses within the transcendental field:** Communication at this level is instantaneous and effortless.
  5. **Wholeness moving within itself:** In unity consciousness daily life is experienced in terms of this frictionless and effortless flow of information

