WEB TECHNOLOGIES

Callback and Promises

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Callbacks

Introduction

- As seen in setInterval, setTimeout and addEventListener, a function accepts a function reference as an argument
- They will be called asynchronously based on timer or other events
- These function references are called **Callback functions**

- Example:
  div.addEventListener("keypress", **function(){ … }**);

Promises

Introduction

- A promise is used to handle the asynchronous result of an operation.
- With Promises, we can defer execution of a code block until an async request is completed.
- The Promise object is created using the new keyword and contains the promise; this is an executor function which has a **resolve** and a **reject** callback
- Essentially, a promise is a returned object to which you attach callbacks, instead of passing callbacks into a function.

```
const promise = new Promise(function(resolve, reject) {
  // promise description
});
```

Promises

Example


```
var weather;
const date = new Promise(
    function(resolve, reject) {
        weather = true; //usually a API call
        if (weather) {
                const dateDetails = {
                        name: 'Cubana Restaurant',
                        location: '55th Street',
                        table: 5
                };
                resolve(dateDetails)
        } else {
                reject(new Error('Bad weather'))
        }
    }
);
```

```
date
.then(function(done) {
    console.log('We are going on a date!')
    console.log(done)
    })
.catch(function(error) {
    console.log(error.message)
    })
```

Callback and Promises

Comparison

- Callbacks and Promises are not the same

- Callbacks are function passed to another function as a reference
- Chaining of Callbacks can be clumsy and lead to **Callback Hell**

- Promises use Callbacks and more elegant than Callbacks
- Chaining of Promises is supported

THANK YOU

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