

# Callback Hell and Promises

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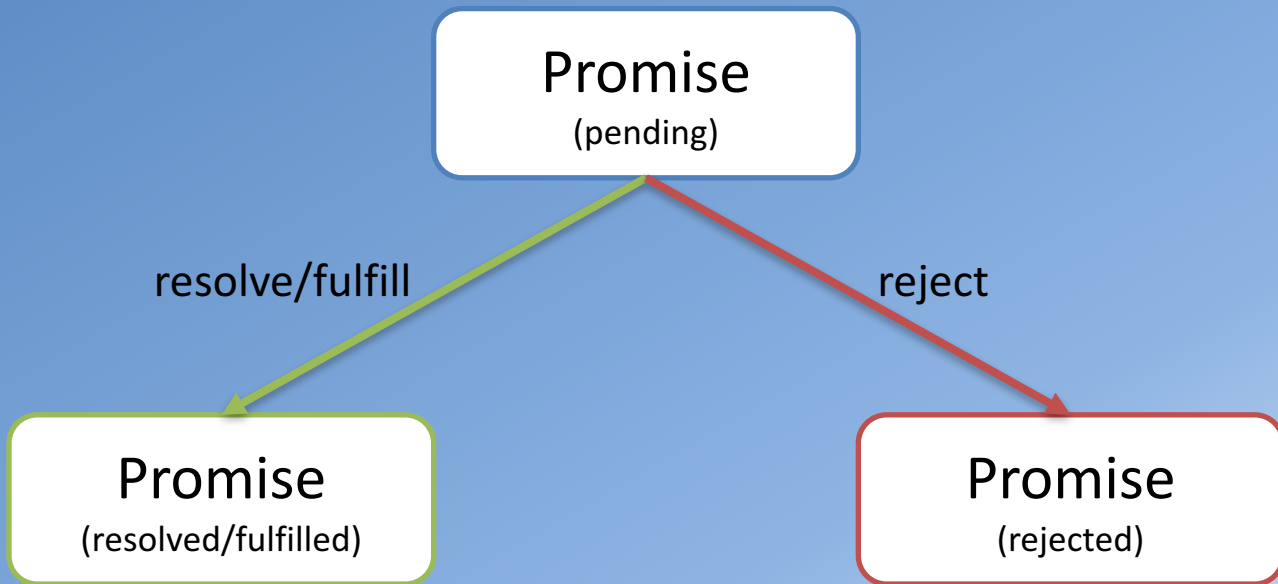
# Callback Hell

- Heavily nested callback code
  - Results from our tendency to write code top to bottom
  - Pyramid of doom
- Can use promises to tame it
  - Tries to preserve the top-down appearance of the code

# Promise

- Promise is a mechanism that supports asynchronous computation
- Proxy for a value not necessarily known when the promise is created:
  - It represents a value that may be available now, or in the future, or never

# Promise



`new Promise ( function (resolve, reject) { . . . } );`

# Why Promises?

- Solves the callback hell problem
- Promises can be chained
- Can immediately return:
  - `Promise.resolve(result)`
  - `Promise.reject(error)`

# Consuming Promises

- Consumers of promise are notified of the fulfillment or rejection of the promise
  - Register the callbacks to handle fulfillment and rejection with the `.then()`
    - can be chained
  - Use `.catch()` for handling errors

- Example

promise

```
.then( () => { })  
.catch( () => { });
```