

HTML5 Web Storage, IndexedDB and File System

IndexedDB: Cursors, Indexes & Ranges

Craig Shoemaker
craigshoemaker.net
@craigshoemaker



pluralsight 
hardcore developer training

Contents

Introduction

Web
Storage

IndexedDB

File System

Libraries

Introduction &
Concepts

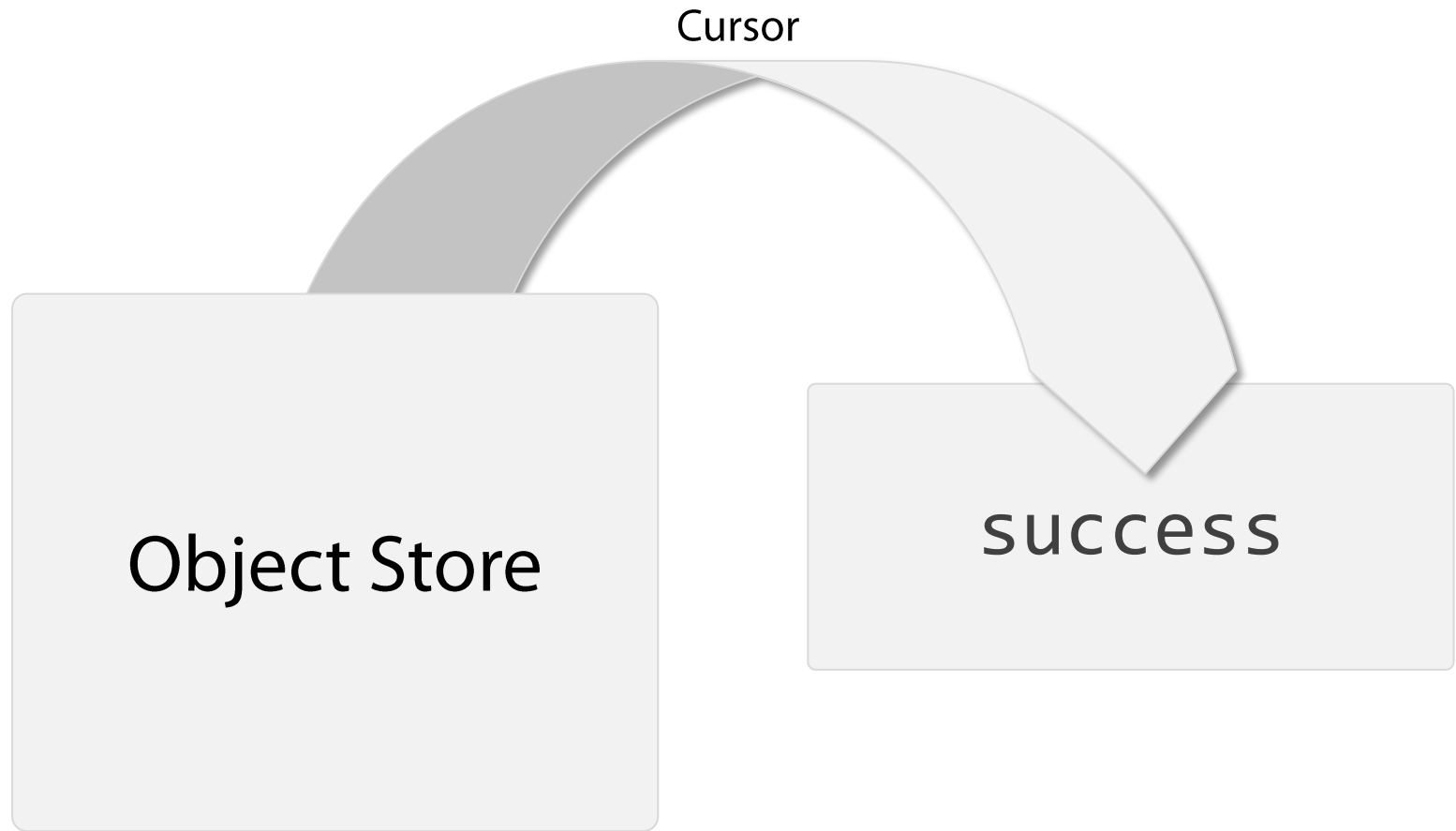
Initialization & CRUD
Operations

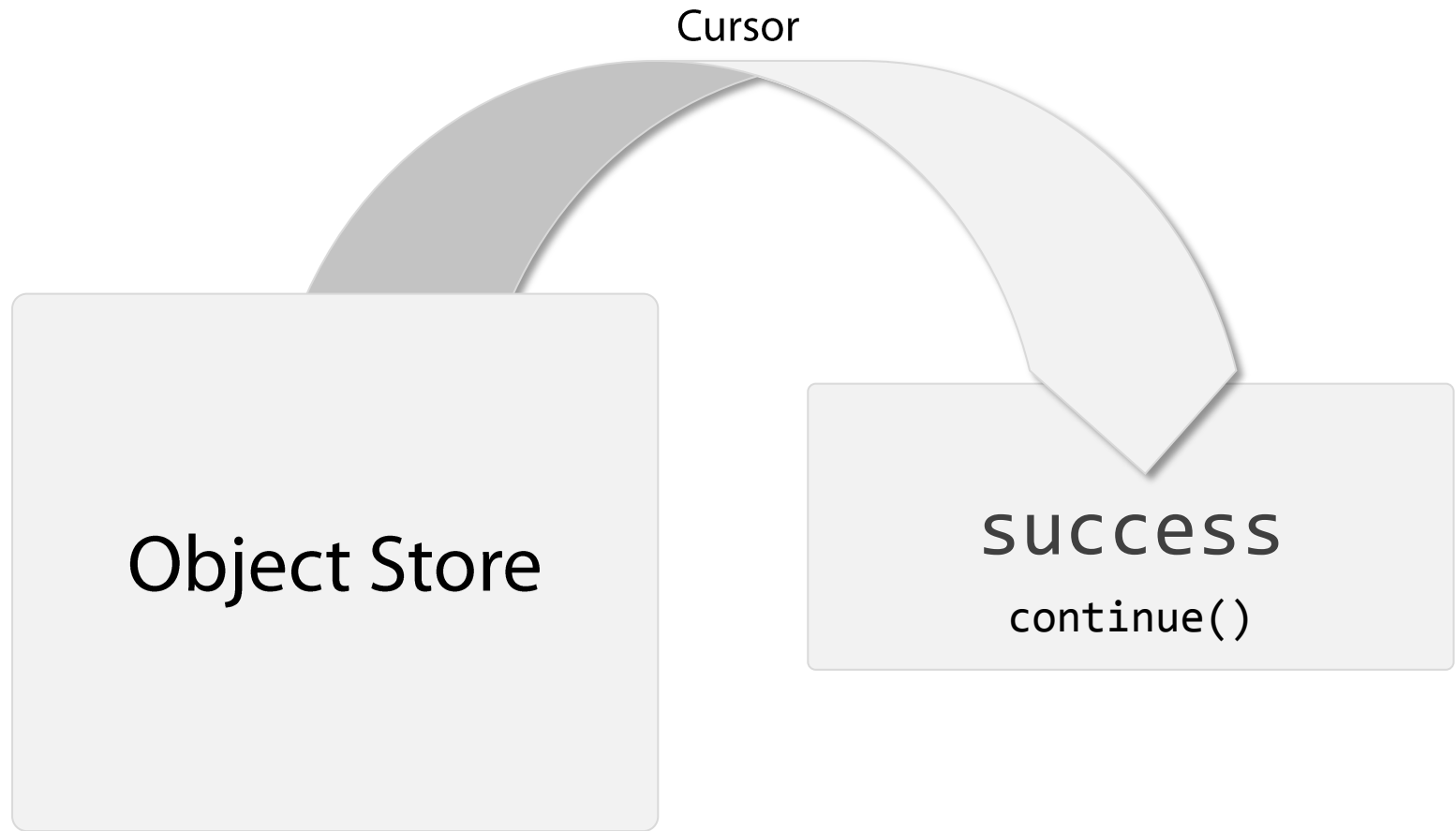
Cursors, Indexes &
Ranges

Cursors



Object Store

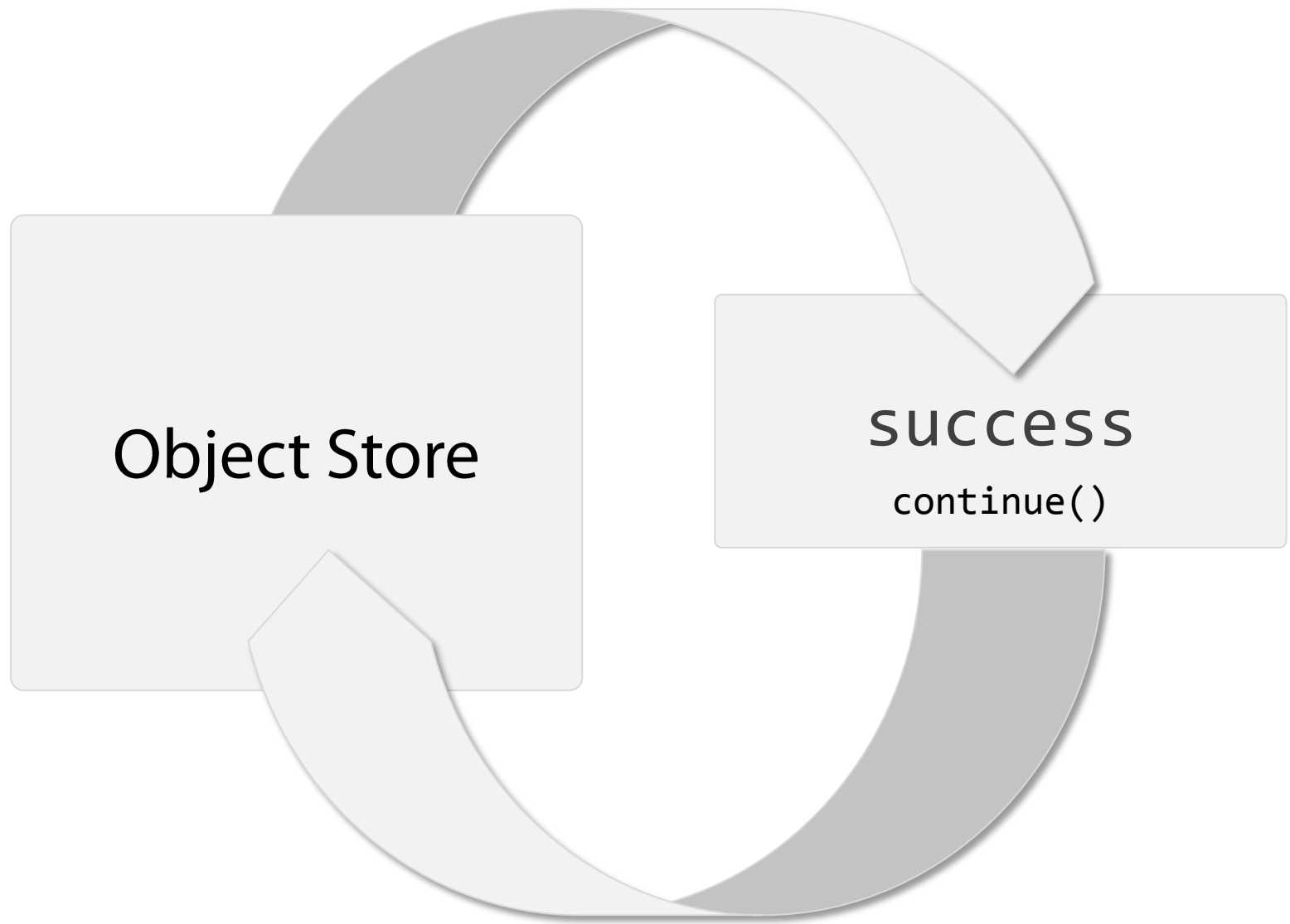




Cursor

Object Store

success
continue()



Detecting "Done"

Get
Cursor
Count

Get
Cursor
Count

Execute
Cursor

Get
Cursor
Count

Execute
Cursor

Continue
Until
iteration count
equals cursor count

A cursor is done is when...

iteration amount = cursor count

Ranges

A constraint you pass to a cursor to restrict results.

Name	Age
John	25
Dan	26
James	27
Samantha	27
Heidi	28
Mary	29
Jason	30

upperBound(28)

Name	Age
John	25
Dan	26
James	27
Samantha	27
Heidi	28
Mary	29
Jason	30

- John, 25
- Dan, 26
- James, 27
- Samantha, 27
- Heidi, 28

upperBound(28, true)

Name	Age
John	25
Dan	26
James	27
Samantha	27
	28

- John, 25
- Dan, 26
- James, 27
- Samantha, 27

Tip

The optional `open` parameter asks, "Should I exclude the given value in the results?"

lowerBound(28)

Name	Age
John	25
Dan	26
James	27
Samantha	27
Heidi	28
Mary	29
Jason	30

- Heidi, 28
- Mary, 29
- Jason, 30

lowerBound(28, true)

Name	Age
John	25
Dan	26
James	27
Samantha	27
	28

- Mary, 29
- Jason, 30

Tip

The optional `open` parameter asks, "Should I exclude the given value in the results?"

bound(26, 29)

Name	Age
John	25
Dan	26
James	27
Samantha	27
Heidi	28
Mary	29
Jason	30

- Dan, 26
- James, 27
- Samantha, 27
- Heidi, 28
- Mary, 29



bound(26, 29, true, false)

Name	Age
John	25
Dan	26
James	27
Samantha	27
Heidi	28
Mary	29
Jason	30

- James, 27
- Samantha, 27
- Heidi, 28
- Mary, 29

only(27)

Name	Age
John	25
Dan	26
James	27
Samantha	27
Heidi	28
Mary	29
Jason	30

- James, 27
- Samantha, 27

Summary



Storage ▾

IndexedDB ▾

File System ▾

Concepts ▾

Libraries ▾

Cursors, Indexes & Ranges

last name, age, age range, etc.



db Model ⓘ

Upgrade ⓘ

Cursor

Index

Range (numeric)

Range (string)

Ordering

```
var db = {
  name: 'CursorDB',
  version: 1,
  instance: {},
  defaultErrorHandler: function (e) {
    $$result.log(e);
  },
  setDefaultErrorHandler: function (request) {
    if ('onerror' in request) {
      request.onerror = db.defaultErrorHandler
    }

    if ('onblocked' in request) {
      request.onblocked = db.defaultErrorHandler
    }
  }
}
```

RESULT

- Creating `people` store
- 100 people objects are now added to the `people` store.
- The `CursorDB` database open and ready.

Up Next...



Storage ▾

IndexedDB ▾

File System ▾

Concepts ▾

Libraries ▾

Performance

Note: Since there are so many objects loaded into this store make sure you give the browser a sufficient amount of time to seed the store the first time you run this demo. It's possible the database could take perhaps 30 seconds or so to open the database once data is in the store.



Range (numeric)

Range (string)

```
var
  parts = $('#input-box').val().split('-'),
  startAge = 0,
  endAge = 0;

startAge = Number(parts[0]);

if (isNaN(startAge)) {
  $$result.log('You must enter a numeric value.');
```

RESULT

- Creating `people` store
- Attempting to seed data store with 500K objects...
- 500000 people objects are now added to the `people` store.
- **Make sure to wait for the open notification (after this line) to appear before you proceed.**
- The `PerformanceDB` database open and ready.