

Blocks

John Poole, Primate Labs

john@primatelabs.ca

[@jfpoole](#)

What are blocks?

- ✦ Anonymous inline collections of code.
- ✦ Similar to functions, but can capture state.

```
int value = 3;  
int (^myBlock)(int) = ^(int param) {  
    return value * param;  
};
```


Block Features

- ✦ Typed parameter list

```
int value = 3;  
int (^myBlock)(int) = ^(int param) {  
    return value * param;  
};
```


Block Features

- ✦ Inferred or declared return type

```
int value = 3;  
int (^myBlock)(int) = ^(int param) {  
    return value * param;  
};
```


Block Features

- ✦ Can capture state from containing lexical scope

```
int value = 3;  
int (^myBlock)(int) = ^(int param) {  
    return value * param;  
};
```


Block Features

- ✦ Can modify state of containing lexical scope

```
__block int value = 3;  
void (^myBlock)(int) = ^(int param) {  
    value = param;  
};
```


Blocks Examples

Grand Central Dispatch

- ✦ Implements a thread pool for task parallelism.
- ✦ Easy way to add concurrency to your application.
 - ✦ Keep lengthy tasks off the main thread.
 - ✦ Run multiple tasks at the same time.
- ✦ Available in Mac OS X 10.6, iOS 4.0.
- ✦ Downside? Low-level C API.

NSOperationQueue

- ✦ Available in Mac OS X 10.5.
- ✦ Implemented with GCD in Mac OS X 10.6.
- ✦ Preferred way to use Grand Central Dispatch.
 - ✦ Higher-level API.
 - ✦ Block support makes adding operations easy!

NSOperationQueue Example



Craig Hockenberry

@chockenberry

 **Follow**

Once you figure them out, dispatch queues are pretty much like crack, aren't they? And, of course, NSOperation is the gateway drug.

24 Apr 12



Reply



Retweet



Favorite

BlocksKit

- ✦ “The Objective-C block utilities you always wish you had.”
- ✦ “Use blocks where you think they should be used ('cause they're there now).” @incanus77
- ✦ <https://github.com/zwaldowski/BlocksKit>

Questions?

<https://github.com/jfpoole/pdx-cocoaheads-blocks>

john@primatelabs.ca

[@jfpoole](#)