

Extending Xcode 8

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A Good Developer...



Source Editor Extensions



Source Editor Extensions

- ⊕ Debuting with Xcode 8
- ⊕ Extend Xcode's source text editor only
- ⊕ Only Apple-supported mechanism



Bad News

- ⊕ Alcatraz is dead
- ⊕ Scope of extension impact is limited
- ⊕ Delivery is by host-application only



Good News

- ⊕ Apple approved
- ⊕ Designed for security and stability
- ⊕ Signal of things to come?



World of Possibilities...



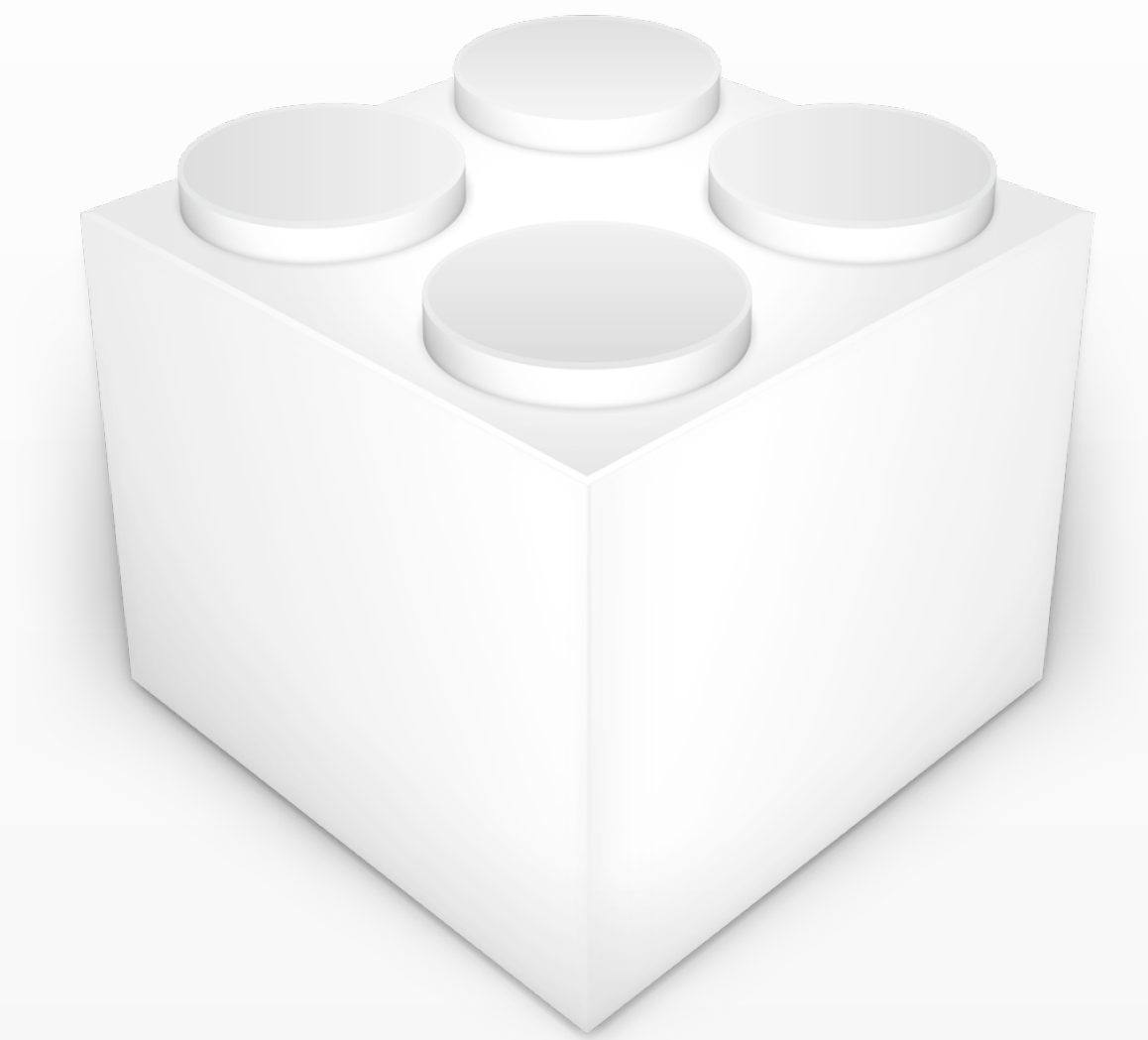
World of Possibilities...

- ⊕ Transform text and selection
- ⊕ Access web resources
- ⊕ Display rudimentary UI
- ⊕ Anything the host app can do...

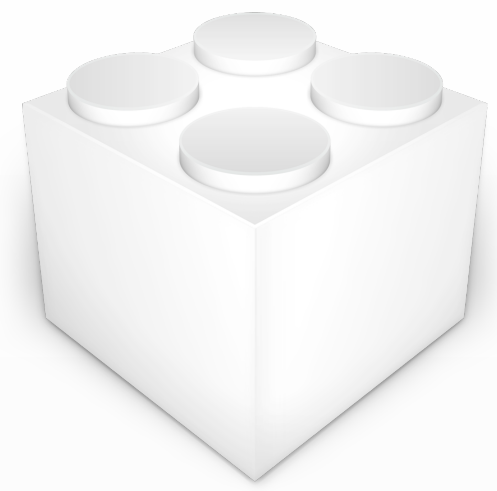


... and Impossibilities

- ⊕ Anything outside the text editor
 - Project manipulation
 - Leveraging Xcode's compiler state
- ⊕ Dynamic responses to user actions
 - Only menu and keyboard shortcut

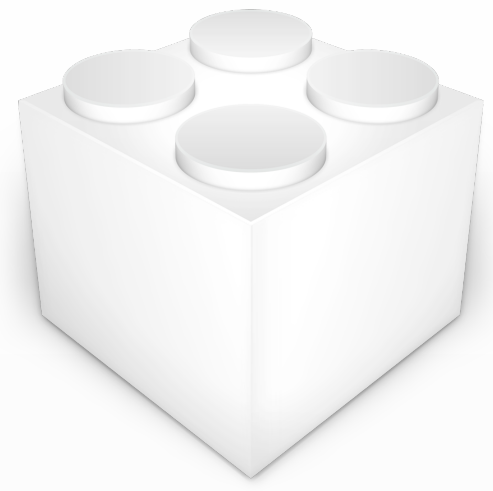


Build & Run



Build & Run

- ⊕ Built upon App Extensions
- ⊕ Delivered by host application
- ⊕ Debuggable within Xcode itself



New Project

- ⊕ Create a new Mac *application*
- ⊕ Add a new extension *target*
- ⊕ Build & Run
- ⊕ Select Xcode as the target

Choose a template for your new project:

iOS

watchOS

tvOS

macOS

Cross-platform

Filter

Application



Cocoa
Application



Red Sweater
Application



Game



Command Line
Tool

Framework & Library



Cocoa
Framework



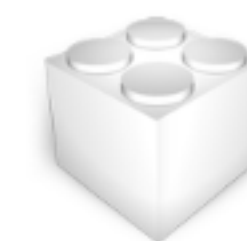
Library



Metal Library

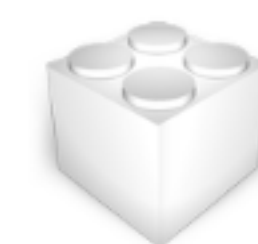


XPC Service



Bundle

Other



Cancel

Previous

Next

Choose options for your new project:

Product Name: XcodeExtender

Team: Daniel Jalkut (Personal Team)

Organization Name: Daniel Jalkut

Organization Identifier: com.example

Bundle Identifier: com.example.XcodeExtender

Language: Swift

☐ Use Storyboards

☐ Create Document-Based Application

Document Extension: scamp

☐ Use Core Data

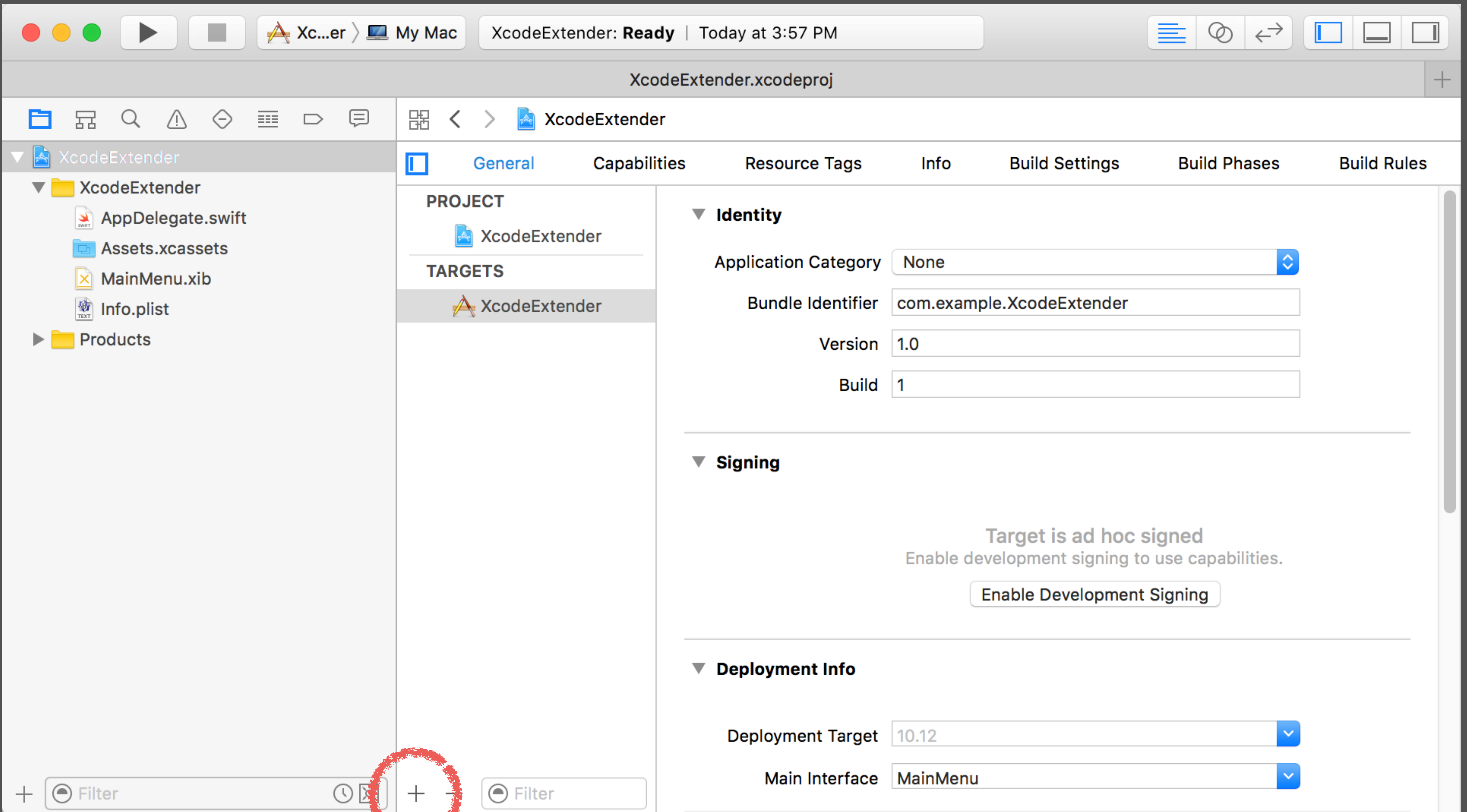
☐ Include Unit Tests

☐ Include UI Tests

Cancel

Previous

Next



Choose a template for your new target:

iOS watchOS tvOS **macOS** Cross-platform

Filter

Application Extension



Action Extension



Audio Unit
Extension



Content Blocker
Extension



Finder Sync
Extension



Photo Editing
Extension



Safari Extension



Share Extension



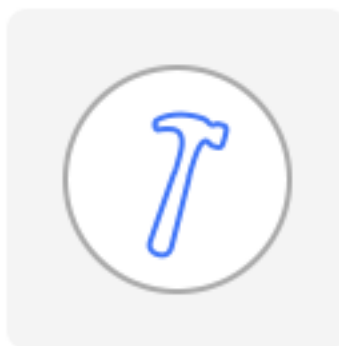
Shared Links
Extension



Smart Card
Token Extension



Today Extension



Xcode Source
Editor Extension

Test

Cancel

Previous

Next

Choose options for your new target:

Product Name: MyExtension

Team: Daniel Jalkut (Personal Team)

Organization Name: Daniel Jalkut

Organization Identifier: com.example.XcodeExtender

Bundle Identifier: com.example.XcodeExtender.MyExtension

Language: Swift

Project: XcodeExtender

Embed in Application: XcodeExtender

Cancel

Previous

Finish



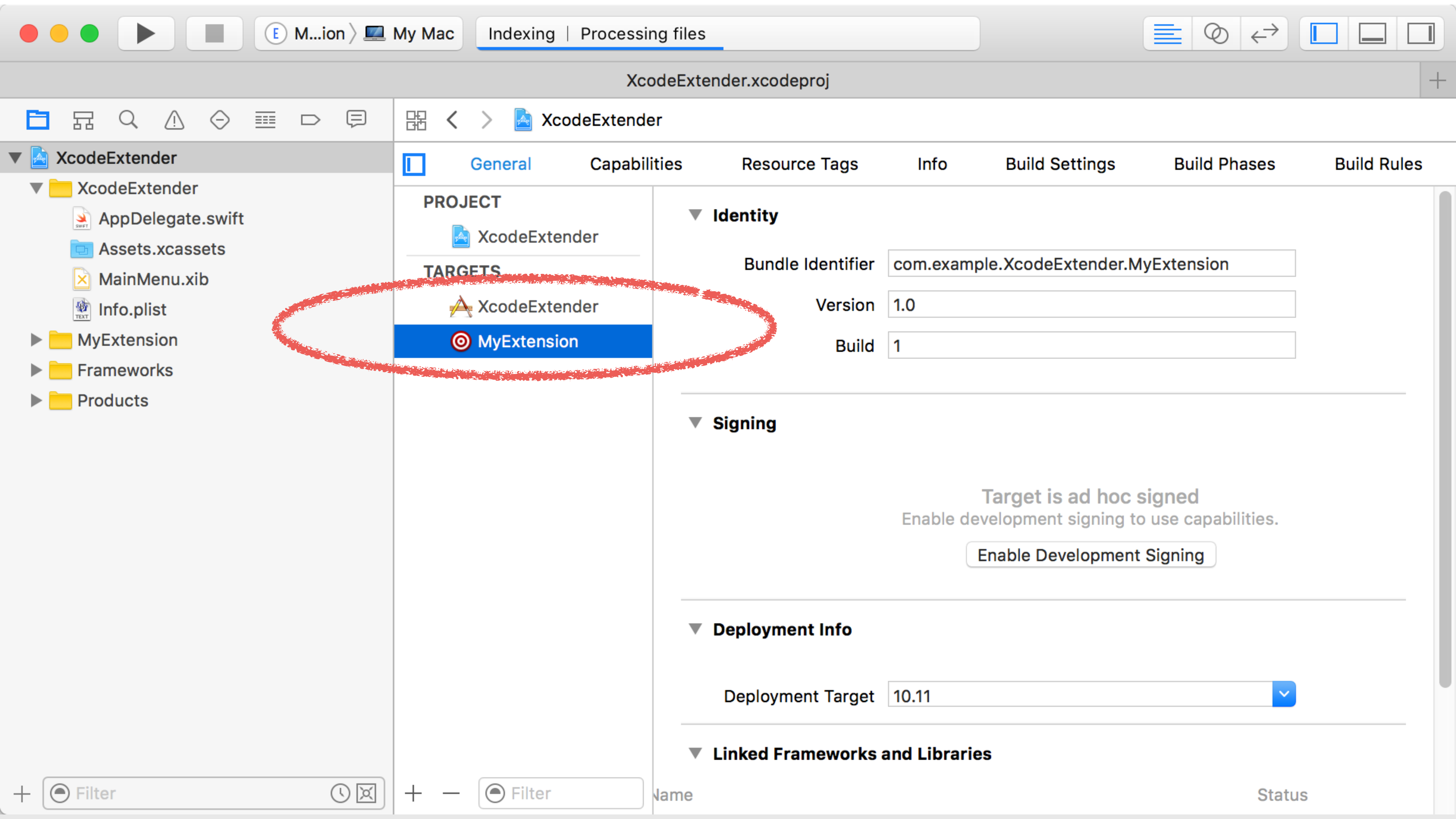
Activate "MyExtension" scheme?

This scheme has been created for the "MyExtension" target. Choose Activate to use this scheme for building and debugging. Schemes can be chosen in the toolbar or Product menu.

☐ Do not show this message again

Cancel

Activate



Choose an app to run:

Recent Applications

 Xcode

All Applications

 1Password 6

 Accessorizer

 Acorn

 Acorn

 Adobe Help Viewer 1.1

 Affinity Designer

 Agenda Minder

 AirPort Utility 5.6

 Alfred

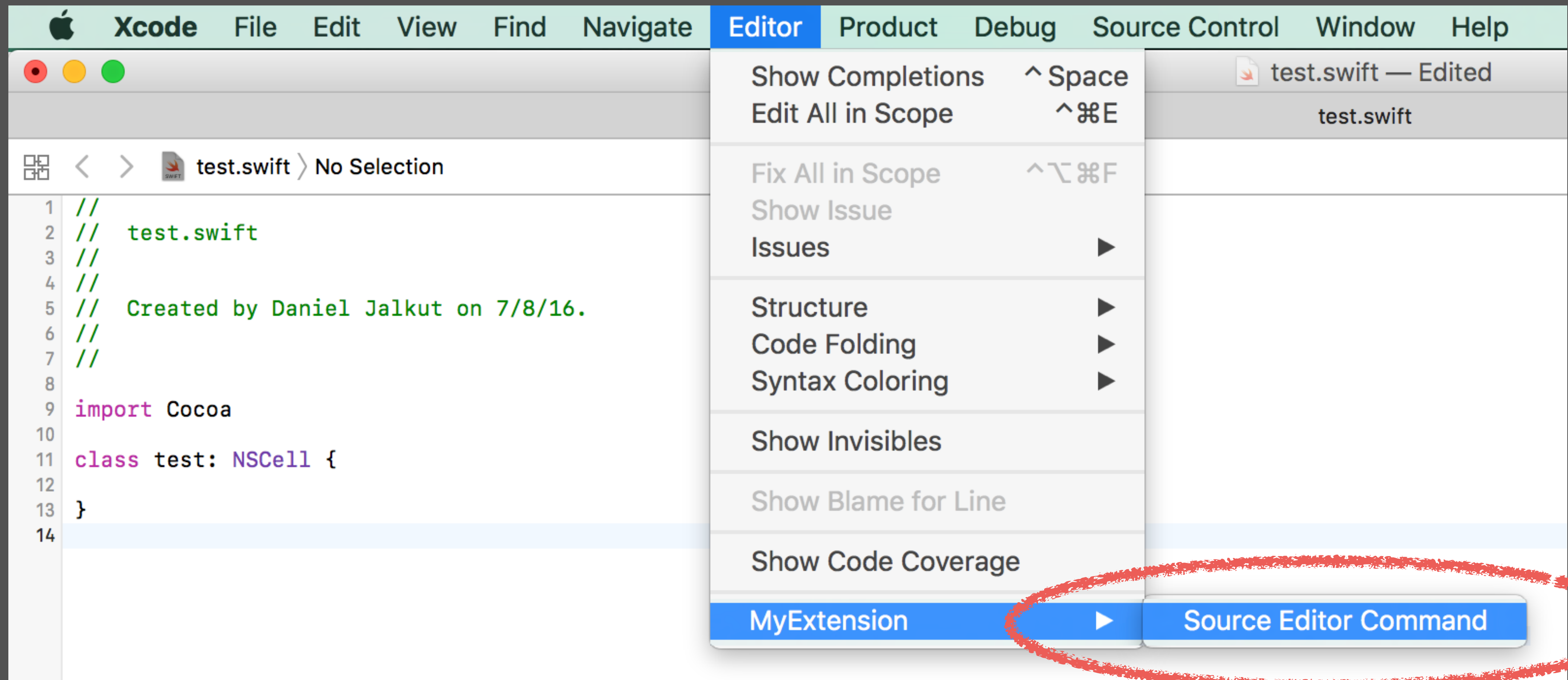
 Filter

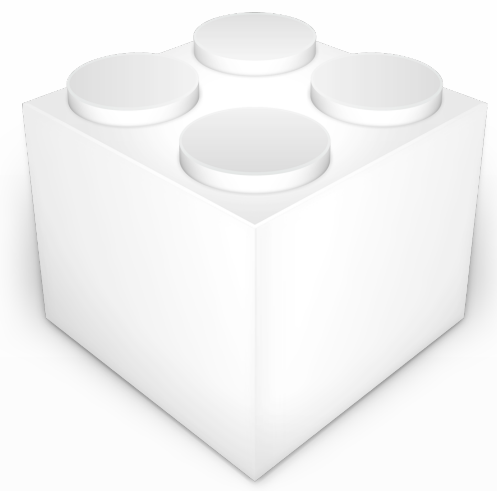
Browse...

Cancel

Run







Caveats

- ⊕ Additional setup for 10.11
- ⊕ You must sign your app and extension!
- ⊕ Run app to nudge extension registration
- ⊕ Wait a few moments after launching



Hot Tips



Hot Tips

- ⊕ Select Xcode as the debug target

	Info	Arguments	Options	Diagnostics
▶ Build 2 targets ▶ ▶ Run Debug ▶ Test Debug ▶ Profile Release ▶ Analyze Debug ▶ Archive Release	Build Configuration Debug			
	Executable Xcode.app			
	☐ Debug Executable			
	Debug Process As ☒ Me (daniel)			
	root			
Launch ☒ Automatically				
Wait for executable to be launched				

Duplicate Scheme

Manage Schemes...

☐ Shared

Close



Hot Tips

- ⊕ Select Xcode as the debug target
- ⊕ Pass a source file path to Xcode

	Info	Arguments	Options	Diagnostics
Build 2 targets				
Run Debug				
Test Debug				
Profile Release				
Analyze Debug				
Archive Release				
	Build Configuration	Debug		
	Executable	Xcode.app		
		☐ Debug executable		
	Debug Process As	☒ Me (daniel)		
		☐ root		
	Launch	☒ Automatically		
		☐ Wait for executable to be launched		

Duplicate Scheme

Manage Schemes...

☐ Shared

Close

▶ **Build**
2 targets

▶ ▶ **Run**
Debug

▶ **Test**
Debug

▶ **Profile**
Release

▶ **Analyze**
Debug

▶ **Archive**
Release

InfoArgumentsOptionsDiagnostics

▼ Arguments Passed On Launch

☒ /Volumes/Data/daniel/Desktop/test.swift

+

—

▼ Environment Variables

NameValue

No Environment Variables

+

—

Expand Variables Based On

XcodeExtender

Duplicate Scheme

Manage Schemes...

☐ Shared

Close



Hot Tips

- ⊕ Select Xcode as the debug target
- ⊕ Pass a source file path to Xcode
- ⊕ Give your command a keyboard shortcut



Key Bindings



General



Accounts



Behaviors



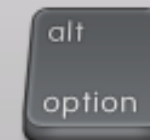
Navigation



Fonts & Colors



Text Editing



Key Bindings



Source Control



Components



Locations

Key Bindings Set

Default



All

Menu

Text

Customized (6)

Conflicts (11)



try harder



Command

Key

Try Harder ▶ Try! Opening a Browser URL (Editor Menu for S...

Try Harder ▶ Try! Displaying an Alert (Editor Menu for Source...

Try Harder ▶ **Try! Inserting Placeholders** (Editor Menu for...

⌘9

Try Harder ▶ Try! Modifying Selected Text (Editor Menu for S...

Try Harder ▶ Try! A Browser URL (Editor Menu for Source Co...

Try Harder ▶ Try! An Alert (Editor Menu for Source Code)

Try Harder ▶ Try! Harder (Editor Menu for Source Code)

Default shortcut: None



Hot Tips

- ⊕ Select Xcode as the debug target
- ⊕ Pass a source file path to Xcode
- ⊕ Give your command a keyboard shortcut
- ⊕ Keep an eye on Apple's own extensions



Try! Harder



Try! Harder

- ⊕ github.com/danielpunkass/tryharder
- ⊕ Standalone project with example extensions



Try! Harder

- ⊕ Manipulate text efficiently
- ⊕ Open a web page
- ⊕ Display rudimentary UI
- ⊕ Insert placeholder text
- ⊕ More?



As Good As Your Tools

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