Launch Arguments & NSUserDefaults

Frank Lefebvre

Xcode Schemes

Info	**Arguments**	Options	Diagnostics

▼ **Arguments Passed On Launch**

☑ argument1
☑ argument2
☑ argument3
+ −

[0]	executable path
[1]	argument1
[2]	argument2
[3]	argument3

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Info **Arguments** Options Diagnostics

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☑ argument1 argument2 argument3

\+ −

[0]	executable path
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Info **Arguments** Options Diagnostics

▼ **Arguments Passed On Launch**

☑ "word1 word2 word3"

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[0]	executable path
[1]	word1 word2 word3

Obtain launch arguments in Cocoa application

- main

Main: Objective-C

```objc
int main(int argc, char * argv[])
{
  @autoreleasepool {
    for (int i = 0; i < argc; i ++) {
      NSLog(@"%s", argv[i]);
    }
  }
  return 0;
}
```

Main: Swift

```swift
// C_ARGC: CInt
// C_ARGV: UnsafeMutablePointer
//         <UnsafeMutablePointer<Int8>>

for i in 0..<Int(C_ARGC) {
  let arg = String.fromCString(C_ARGV[i])
  println(\(arg))
}
```

Obtain launch arguments in Cocoa application

- main

- NSProcessInfo

NSProcessInfo

```
NSArray* args =
[NSProcessInfo processInfo].arguments


let args =
NSProcessInfo.processInfo().arguments
// args: [AnyObject]!
```

Process (Swift)

```swift
// Process.arguments: [String]

for arg in Process.arguments {
  println(\(arg))
}
```

Obtain launch arguments in Cocoa application

- main

- NSProcessInfo

- NSUserDefaults

NSUserDefaults

- Arguments: –option value

```
id value = [[NSUserDefaults standardDefaults]
objectForKey:@"option"];
```

- Type conversion

```
NSString* value = [[NSUserDefaults
standardUserDefaults] stringForKey:@"option"];
```

- Complex types

Defaults Domains

- argument domain

- application domain

- global domain

- language domain

- registration domain

Usages

- Override user default

- Application Configuration

- Language & Localization Testing

- Debugging

Application Configuration

- Production vs Staging vs Development

    - Web Service URL

    - Logging configuration

- registerDefaults: production settings

Localization

- -AppleLanguage (en)

- -AppleLocale fr_FR

- -NSDoubleLocalizedStrings YES

- -NSShowNonLocalizedStrings YES

- -AppleTextDirection YES

- -NSForceRightToLeftWritingDirection YES

Debugging : Core Data

- -com.apple.CoreData.SQLDebug 3

- -com.apple.CoreData.Ubiquity.LogLevel 3

- -com.apple.CoreData.SyntaxColoredLogging YES

- -com.apple.CoreData.MigrationDebug

Debugging : Views

- UIKit

  - -UIViewShowAlignmentRects YES

- AppKit (Yosemite)

  - -NSResponderDebugResponderLoops YES

Mining for Hidden Gems

```objc
@implementation NSUserDefaults (Spying)

#pragma GCC diagnostic push
#pragma GCC diagnostic ignored "-Wobjc-protocol-method-implementation"

- (NSArray*)arrayForKey:(NSString *)defaultName
{
    [self logDefault:defaultName withType:@"array"];
    return nil;
}

// ...

#pragma GCC diagnostic pop

@end
```

Results

UIDisableLegacyTextView   WebKitKerningAndLigaturesEnabledByDefault
UIKitUsesCoreUIArtwork   hasAccessibilityBeenMigrated
UIPreferredContentSizeCategoryName   _UIConstraintBasedLayoutEngageNonLazily
UIViewShowAlignmentRects   NSTypesetterBehavior
NSTypesetterCompatibilityLevel   NSStringDrawingTypesetterBehavior
NSTextShowsInvisibleCharacters   NSTextShowsControlCharacters
NSTextAllowsNonContiguousLayout   NSTextBackgroundLayoutEnabled
NSTighteningFactorForTruncation   NSForceRightToLeftWritingDirection
NSStringDrawingLongTermCacheSize   NSStringDrawingLongTermThreshold
NSStringDrawingShortTermCacheSize   NSPreTigerAttributedStringHash
_UIConstraintBasedLayout   NSConstraintBasedLayoutShouldIntegralize
_UIConstraintBasedLayoutPlaySoundWhenEngaged
NSConstraintBasedLayoutDebug
NSConstraintBasedLayoutDebugEngineConsistency
NSConstraintBasedLayoutLogPivotCounts
NSConstraintBasedLayoutDebugIntegralization

UIDisableLegacyTextView WebKitKerningAndLigaturesEnabledByDefault UIKitUsesCoreUIArtwork hasAccessibilityBeenMigrated UIPreferredContentSizeCategoryName _UIConstraintBasedLayoutEngageNonLazily UIViewShowAlignmentRects NSTypesetterBehavior NSTypesetterCompatibilityLevel NSStringDrawingTypesetterBehavior NSTextShowsInvisibleCharacters NSTextShowsControlCharacters NSTextAllowsNonContiguousLayout NSTextBackgroundLayoutEnabled NSTighteningFactorForTruncation NSForceRightToLeftWritingDirection NSStringDrawingLongTermCacheSize NSStringDrawingLongTermThreshold NSStringDrawingShortTermCacheSize NSPreTigerAttributedStringHash _UIConstraintBasedLayout CUILogFPOArtwork WebKitSingleTapModeEnabled com.apple.uikit.textWebKitJavaEnabled WebKitJavaEnabled com.apple.uikit.textWebKitJavaScriptEnabled WebKitJavaScriptEnabled com.apple.uikit.textWebKitPluginsEnabled WebKitPluginsEnabled com.apple.uikit.textWebKitDatabasesEnabledPreferenceKey WebKitDatabasesEnabledPreferenceKey com.apple.uikit.textWebKitLocalStorageEnabledPreferenceKey WebKitLocalStorageEnabledPreferenceKey com.apple.uikit.textWebKitOfflineWebApplicationCacheEnabled WebKitOfflineWebApplicationCacheEnabled com.apple.uikit.textWebKitDiskImageCacheEnabled WebKitDiskImageCacheEnabled com.apple.uikit.textWebKitAcceleratedDrawingEnabled WebKitAcceleratedDrawingEnabled com.apple.uikit.textWebKitDefaultFontSize WebKitDefaultFontSize com.apple.uikit.textWebKitAlwaysUseBaselineOfPrimaryFontPreferenceKey WebKitAlwaysUseBaselineOfPrimaryFontPreferenceKey com.apple.uikit.textWebKitStandardFont WebKitStandardFont com.apple.uikit.textWebKitMinimumFontSize WebKitMinimumFontSize com.apple.uikit.textWebKitShowDebugBorders WebKitShowDebugBorders com.apple.uikit.textWebKitShowRepaintCounter WebKitShowRepaintCounter NSHTMLPrefixSpaces NSHTMLInterchangeNewline NSHTMLNoDefaultFonts NSHTMLTabsToSpaces NSHTMLCoalesceTabSpans NSHTMLTextEncodingName NSHTMLCharacterEncoding NSUndoManagerDefaultLevelsOfUndo WebKitLocalStorageDatabasePathPreferenceKey WebDatabaseDirectory WebKitStoreWebDataForBackup WebKitStorageTrackerEnabledPreferenceKey NSFileManagerRemoveUbiquitousItems WebKitLocalCache WebKitDiskImageCacheSavedCacheDirectory WebSmartInsertDeleteEnabled WebKitUseSiteSpecificSpoofing WebKitCursiveFont WebKitDefaultFixedFontSize WebKitDefaultTextEncodingName WebKitUsesEncodingDetector WebKitFantasyFont WebKitFixedFont WebKitScreenFontSubstitutionEnabled WebKitForceFTPDirectoryListings WebKitFTPDirectoryTemplatePath WebKitWebSecurityEnabled WebKitAllowUniversalAccessFromFileURLs WebKitAllowFileAccessFromFileURLs WebKitJavaScriptCanOpenWindowsAutomatically WebKitMinimumLogicalFontSize WebKitPictographFont WebKitPrivateBrowsingEnabled WebKitSansSerifFont WebKitSerifFont WebKitDisplayImagesKey WebKitLoadSiteIconsKey WebKitShrinksStandaloneImagesToFit WebKitEditableLinkBehavior WebKitTextDirectionSubmenuInclusionBehaviorPreferenceKey WebKitDOMPasteAllowedPreferenceKey WebKitUsesPageCachePreferenceKey WebKitPageCacheSupportsPluginsPreferenceKey WebKitBackForwardCacheExpirationIntervalKey DisableWebKitDeveloperExtras WebKitDeveloperExtras IncludeDebugMenu WebKitDeveloperExtrasEnabledPreferenceKey WebKitJavaScriptExperimentsEnabledPreferenceKey WebKitAuthorAndUserStylesEnabledPreferenceKey WebKitApplicationChromeModeEnabledPreferenceKey WebKitStandalonePreferenceKey WebKitMaximumImageSize WebKitTelephoneParsingEnabledPreferenceKey WebKitAllowMultiElementImplicitFormSubmissionPreferenceKey WebKitLayoutIntervalPreferenceKey WebKitMaxParseDurationPreferenceKey WebKitAlwaysUseAcceleratedOverflowScroll WebKitAllowCompositingLayerVisualDegradation WebKitWebArchiveDebugModeEnabledPreferenceKey WebKitLocalFileContentSniffingEnabledPreferenceKey WebKitJavaScriptCanAccessClipboard WebKitXSSAuditorEnabled WebKitDNSPrefetchingEnabled WebKitAcceleratedCompositingEnabled WebKitCanvasUsesAcceleratedDrawing WebKitAccelerated2dCanvasEnabled WebKitFrameFlatteningEnabled WebKitSpatialNavigationEnabled WebKitPaginateDuringLayoutEnabled WebKitCSSRegionsEnabled WebKitCSSCompositingEnabled WebKitWebAudioEnabled WebKitSeamlessIFramesEnabled WebKitCSSGridLayoutEnabled WebKitAsynchronousSpellCheckingEnabled WebKitHyperlinkAuditingEnabled WebKitUsePreHTML5ParserQuirks WebKitQTKitEnabled WebKitMediaPlaybackRequiresUserGesture WebKitMediaPlaybackAllowsInline WebKitMediaPlaybackAllowsAirPlay WebKitAudioSessionCategoryOverride WebKitNetworkDataUsageTrackingEnabledPreferenceKey WebKitNetworkInterfaceNamePreferenceKey WebKitSuppressesIncrementalRendering WebKitRegionBasedColumnsEnabled WebKitBackspaceKeyNavigationEnabled WebKitWantsBalancedSetDefersLoadingBehavior WebKitMockScrollbarsEnabled WebKitShouldDisplaySubtitles WebKitShouldDisplayCaptions WebKitShouldDisplayTextDescriptions WebKitShouldRespectImageOrientation WebKitRequestAnimationFrameEnabled WebKitUseLegacyTextAlignPositionedElementBehavior WebKitDiagnosticLoggingEnabled WebKitLowPowerVideoAudioBufferSizeEnabled WebKitStorageBlockingPolicy WebKitPlugInSnapshottingEnabled WebKitHiddenPageCSSAnimationSuspensionEnabled WebKitIncrementalRenderingSuppressionTimeoutInSeconds WebKitApplicationCacheDefaultOriginQuota WebKitZoomsTextOnly WebKitMinimumZoomFontSizePreferenceKey WebKitDiskImageCacheMinimumImageSize WebKitDiskImageCacheMaximumCacheSize WebKitInterpolationQualityPreferenceKey WebKitEnablePasswordEchoPreferenceKey WebKitPasswordEchoDurationPreferenceKey MapsFeatureFreedom DebugDynamicMapModesEnabledKey HideDirectionalArrowsKey UseOldLabelsKey AltitudeTelemetryURLKey HighlightUnmatchedRouteLineKey VKReadLandmarksFromDisk VKUseStaticTrafficFeed NSConstraintBasedLayoutShouldIntegralize _UIConstraintBasedLayoutPlaySoundWhenEngaged NSConstraintBasedLayoutDebug NSConstraintBasedLayoutDebugEngineConsistency NSConstraintBasedLayoutLogPivotCounts NSConstraintBasedLayoutDebugIntegralization _NSRaiseWithRecursiveLayoutRequest _NSAllowsScreenFontKerning NSGlyphGeneratorConcreteClassName NSDebugBidi NSCorrectionUnderlineBehavior NSUnderlinesBreakForDescenders PreferCFURLProtocol com.apple.uikit.textWebKitCacheModelPreferenceKey WebKitCacheModelPreferenceKey WebKitOmitPDFSupport DataDetectorsUILogLevel NSAllowContinuousSpellChecking CUIAllowDebugPrefs CUIRenditionBlockCacheCostLimit NSHTMLIndexing NSTextIndexing NSHTMLTesting NSUseLibXML2 NSRunWebKitOnAppKitThread __NSDisableSharingTextTabInstance NSRTFWriteOpenStepCompatibleEncodings NSRTFWritePreserveNaturalAlignment AppleLanguages

Interesting Options

- DataDetectorsUILogLevel (integer)

- NSConstraintBasedLayoutDebug (boolean)

- NSTextShowsInvisibleCharacters (boolean)

- NSTextShowsControlCharacters (boolean)

- WebKitShowDebugBorders (boolean)

- WebKitShowRepaintCounter (boolean)

- WebKitDiagnosticLoggingEnabled (boolean)

References

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- http://sssslide.com/speakerdeck.com/kishikawakatsumi/secrets-of-launch-arguments-ios

- http://oleb.net/blog/2014/02/nsuserdefaults-handling-default-values/

- Apple Tech Note 2239: iOS Debugging Magic

- WWDC 2013 session 219

Conclusion

@franklefebvre   dev@franklefebvre.com

Q&A

@franklefebvre   dev@franklefebvre.com