



iOS & iPadOS App Development Course Reference Guide

Version 1.2

Arun Patwardhan

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About the author

I am an Apple Certified Master Trainer. I have been doing trainings on Apple since the past 8 years. My current areas of research include App Development for Apple's Operating Systems. Apart from training, I am also involved in course design & content development.

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<http://www.linkedin.com/in/arunpatwardhan>

www.amaranthine.in

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Section 1

Introduction to Swift using playgrounds

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Chapter 1: Basic syntax

This chapter contains a list of key concepts for each lesson.

Key points

- No semi colon necessary
- Built in types start with upper case
- Built in types are complex
- Structs are value type, classes are reference type
- Enums are value type
- Closures are reference type
- Generic programming preferred to using `Any` or `AnyObject`
- Memory initialization process is important

Links to knowledge articles

Initialization in Swift

<https://arunpatwardhan.com/2017/04/12/understanding-constructors-initialization-in-swift/>

Links to support articles

None

Applications

None

Terminal Commands used

None

Notes



4

Chapter 4: Design Patterns

This chapter contains a list of key concepts for each lesson.

Key points

- Focus on Protocol oriented Programming
- Extensions can be used on Classes, Structs, Enums, Protocols
- MVC is the default architecture
- MVVM is very popular
- VIPER is very popular
- Protocols also support inheritance

Links to knowledge articles

None

Links to support articles

None

Applications

None

Terminal Commands used

None

Notes





Section 9

Appendix

Appendix A

Appendix A: References and articles related to macOS

Productivity on macOS

Links to knowledge articles

What to do before buying/selling Apple devices?

<https://arunpatwardhan.com/2016/06/01/what-to-do-before-buyingselling-apple-devices/>

Buyers Guide for macOS & iOS in the Enterprise

<https://arunpatwardhan.com/2017/11/20/buyers-guide-for-macos-ios-in-the-enterprise/>

Apple ID & iTunes

<https://arunpatwardhan.com/2016/05/17/apple-id-itunes/>

Apple ID & iCloud in the Enterprise

<https://arunpatwardhan.com/2016/10/27/apple-id-icloud-in-enterprise/>

Backing up your WhatsApp messages using iCloud

<https://arunpatwardhan.com/2015/06/09/backing-up-your-whatsapp-messages-using-icloud/>

Managing all your data on iOS devices

<https://arunpatwardhan.com/2015/07/21/managing-all-your-data-on-ios-devices/>

Sign PDF Documents in Preview on a Mac

<https://arunpatwardhan.com/2013/12/16/sign-pdf-documents-in-preview-on-a-mac/>

Screen and audio recording on macOS & iOS

<https://arunpatwardhan.com/2018/02/28/screen-and-audio-recording-on-macos-ios/>

iPhone Screen Recording – Part 2

<https://arunpatwardhan.com/2018/05/14/iphone-screen-recording-part-2/>

Screen capture and recording in macOS

<https://arunpatwardhan.com/2021/06/02/screen-capture-and-recording-in-macos/>

Links to support articles

Payment methods that you can use with your Apple ID

<https://support.apple.com/en-in/HT202631>

Mac Keyboard Shortcuts

<https://support.apple.com/en-in/HT201236>

Installing macOS

Links to support articles

All Downloads

<https://support.apple.com/en-bw/HT211683>

Installing macOS on a separate APFS volume

<https://support.apple.com/en-in/HT208891>

macOS Big Sur

<https://support.apple.com/en-in/HT201475>

Installing macOS on a separate APFS volume

<https://support.apple.com/en-in/HT208891>

Filesystem in macOS

Links to support articles

How to free up storage space on your Mac

<https://support.apple.com/en-us/HT206996>

SSV

<https://developer.apple.com/news/?id=3xpv8r2m>

macOS Recovery volume

Links to knowledge articles

Creating multi-OS Install Disk

<https://arunpatwardhan.com/2017/04/17/creating-multi-os-install-disk/>

Links to support articles

How to reinstall macOS

<https://support.apple.com/en-us/HT204904>

Revive and Intel based Mac with Apple Configurator 2

<https://support.apple.com/en-au/guide/apple-configurator-2/apdebea5be51/mac>

Revive or restore a Mac with Apple Silicon with Apple Configurator 2

<https://support.apple.com/en-au/guide/apple-configurator-2/apdd5f3c75ad/mac>

Security

Links to knowledge articles

Simple steps towards securing your iPhone

<https://arunpatwardhan.com/2015/08/04/simple-steps-towards-securing-your-iphone/>

Simple steps for securing your Mac

<https://arunpatwardhan.com/2015/08/05/simple-steps-for-securing-your-mac/>

Links to support articles

Use Touch ID on your Mac

<https://support.apple.com/en-in/HT207054>

Hide a user account in macOS

<https://support.apple.com/en-in/HT203998>

About Activation Lock on your Mac

<https://support.apple.com/en-us/HT208987>

How to set a firmware password on your Mac

<https://support.apple.com/en-us/HT204455>

About encrypted storage on your new Mac

<https://support.apple.com/en-us/HT208344>

Change or reset the password of a macOS user account

<https://support.apple.com/en-us/HT202860>

About the Apple T2 Security Chip

<https://support.apple.com/en-us/HT208862>

About Secure Boot

<https://support.apple.com/en-in/HT208330>

Use macOS Recovery on Apple Silicon computers

<https://support.apple.com/en-in/guide/mac-help/mchl82829c17/11.0/mac/11.0#mchl9b13cbdc>

FileVault Institutional Deployment

<https://support.apple.com/en-in/HT202385>

Permission in macOS

Links to support articles

About System Integrity Protection on your Mac

<https://support.apple.com/en-us/HT204899>

Archiving data

Links to knowledge articles

Creating your own Drag and Drop DMG

<https://arunpatwardhan.com/2019/01/04/creating-your-own-drag-and-drop-dmg/>

Document management

Links to knowledge articles

Managing all your data on your Mac

<https://arunpatwardhan.com/2015/05/26/managing-all-your-data-on-your-mac/>

Backing up your WhatsApp messages using iCloud

<https://arunpatwardhan.com/2015/06/09/backing-up-your-whatsapp-messages-using-icloud/>

Managing all your data on iOS devices

<https://arunpatwardhan.com/2015/07/21/managing-all-your-data-on-ios-devices/>

File types in OS X

<https://arunpatwardhan.com/2015/06/01/file-types-in-os-x/>

Links to support articles

Use Universal Clipboard to copy and paste between your Apple devices

<https://support.apple.com/en-in/HT209460>

Use Instant Hotspot to connect to your Personal Hotspot without entering a password

<https://support.apple.com/en-in/HT209459>

System requirements for Continuity on Mac, iPhone, iPad, iPod touch, and Apple Watch

<https://support.apple.com/en-in/HT204689>

Use Continuity Camera on your Mac

<https://support.apple.com/en-in/HT209037>

Install Windows 10 on your Mac with Boot Camp Assistant

<https://support.apple.com/en-us/HT201468>

iCloud for Windows

<https://support.apple.com/en-in/HT204283>

System requirements for iCloud

<https://support.apple.com/en-us/HT204230>

iCloud security overview

<https://support.apple.com/en-us/HT202303>

iCloud Drive FAQ

<https://support.apple.com/en-us/HT201104>

Add your Desktop and Documents files to iCloud Drive
<https://support.apple.com/en-us/HT206985>

If a Time Machine backup takes longer than you expect
<https://support.apple.com/en-in/HT204412>

Application management

Links to support articles

32-bit app compatibility with macOS High Sierra 10.13.4 and later

<https://support.apple.com/en-in/HT208436>

About the "Are you sure you want to open it?" alert (File Quarantine / Known Malware Detection) in OS X

<https://support.apple.com/en-us/HT201940>

Safely open apps on your Mac

<https://support.apple.com/en-us/HT202491>

How to use Activity Monitor on your Mac

<https://support.apple.com/en-us/HT201464>

Notarizing macOS Software Before Distribution

[https://developer.apple.com/documentation/xcode/](https://developer.apple.com/documentation/xcode/notarizing_macos_software_before_distribution)

[notarizing macos software before distribution](https://developer.apple.com/documentation/xcode/notarizing_macos_software_before_distribution)

If you need to install Rosetta on your Mac

<https://support.apple.com/en-us/HT211861>

Applications

[Icons](#)

Network troubleshooting

Links to support articles

TCP and UDP ports used by Apple software products

<https://support.apple.com/en-in/HT202944>

If you use FaceTime and iMessage behind a firewall

<https://support.apple.com/en-us/HT202078>

System Status

<https://www.apple.com/support/systemstatus/>

If your Apple devices aren't receiving Apple push notifications

<https://support.apple.com/en-au/HT203609>

Applications

[Push Diagnostics](#)

Peripherals and accessories

Links to support articles

About AirPrint

<https://support.apple.com/en-in/HT201311>

Adapters for the Thunderbolt 3 (USB-C) or USB-C port on your Mac or iPad Pro

<https://support.apple.com/en-us/HT207443>

System Troubleshooting

Links to knowledge articles

List of tools used

<https://arunpatwardhan.com/2015/10/28/os-x-and-ios-troubleshooters-toolkit/>

macOS & iOS IT Tool List

<https://arunpatwardhan.com/2017/05/18/macos-ios-it-tool-list/>

Configuring/Troubleshooting OS X Using Command Line

<https://arunpatwardhan.com/2015/11/26/configuringtroubleshooting-os-x-using-command-line/>

Links to support articles

Use Apple Diagnostics to test your Mac

<https://support.apple.com/en-us/HT202731>

Apple Diagnostics reference codes

<https://support.apple.com/en-au/HT203747>

How to turn your Mac on or off

<https://support.apple.com/en-in/HT201150>

If a Mac accessory needs more power or is using too much power

<https://support.apple.com/en-in/HT204377>

How to reset the SMC of your Mac

<https://support.apple.com/en-us/HT201295>

Reset NVRAM or PRAM on your Mac

<https://support.apple.com/en-us/HT204063>

How to use safe mode on your Mac

<https://support.apple.com/en-us/HT201262>

Automation in macOS

Links to knowledge articles

Terminal Commands for OS X – Basic

<https://arunpatwardhan.com/2014/01/17/terminal-commands-for-os-x-basic/>

Terminal Commands for OS X – Part 2

<https://arunpatwardhan.com/2014/02/12/terminal-commands-for-os-x-part-2/>

Terminal Commands – Part 3

<https://arunpatwardhan.com/2014/03/19/terminal-commands-part-3/>

List of Terminal Commands

<https://arunpatwardhan.com/2020/07/29/list-of-macos-terminal-commands/>

Automation in macOS

<https://arunpatwardhan.com/2018/03/22/automation/>

Sample scripts for macOS

<https://arunpatwardhan.com/2020/03/27/useful-scripts-for-macos/>

Shell scripting in macOS – Part 1

<https://arunpatwardhan.com/2021/06/10/shell-scripting-in-macos-part-1/>

Shell scripting in macOS - Part 2

<https://arunpatwardhan.com/2021/07/02/shell-scripting-in-macos-part-2/>

Shell scripting in macOS - Part 3

<https://arunpatwardhan.com/2021/07/16/shell-scripting-in-macos-part-3-condition-checks/>

Shell scripting in macOS - Part 4

<https://arunpatwardhan.com/2021/07/08/shell-scripting-in-macos-part-4-documentation-and-help/>

Shell scripting in macOS - Part 5

<https://arunpatwardhan.com/2022/12/19/shell-scripting-in-macos-part-5-loops/>

Shell scripting in macOS - Part 6

<https://arunpatwardhan.com/2022/12/19/shell-scripting-in-macos-part-6-user-interaction/>

Shell scripting in macOS - Part 7

<https://arunpatwardhan.com/2022/05/07/shell-scripting-in-macos-part-7-miscellaneous/>

Shell scripting in macOS - Part 8

<https://arunpatwardhan.com/2023/01/25/shell-scripting-in-macos-part-8-arrays-dictionaries/>

Shell scripting in macOS - Part 9

<https://arunpatwardhan.com/2023/01/25/shell-scripting-in-macos-part-9-automating-scripts/>

Shell scripting in macOS - Part 10

<https://arunpatwardhan.com/2023/02/02/shell-scripting-in-macos-part-10-distribution/>

Links to support articles

Launchd generator

<https://zerolaunched.herokuapp.com>



Managing Mac computers in the enterprise

Links to knowledge articles

Making a case for OS X Server

<https://arunpatwardhan.com/2014/10/06/making-a-case-for-os-x-server/>

Links to support articles

Profile Manager Help

<https://help.apple.com/profilemanager/mac/5.1/>

Apple School Manager User Guide

<https://support.apple.com/en-in/guide/apple-school-manager/welcome/web>

Apple Business Manager User Guide

<https://support.apple.com/en-in/guide/apple-business-manager/welcome/web>

Availability of Apple programs and payment methods for education and business

<https://support.apple.com/en-in/HT207305>

Use Device Enrollment

<https://support.apple.com/en-in/HT204142>

Changes introduced in macOS Server 5.7.1

<https://support.apple.com/en-in/HT208312> Appendix A

Appendix B

Appendix B: Keyboard shortcuts

This sections contains symbols appearing on a typical Apple keyboard. It also contains a list of commonly used shortcuts.

Keyboard Symbols

Symbol	Name	Non Apple Keyboard Alternative
⌘	Command key	Windows key
⌃	Control key	Control key
⌫	Escape Key	Escape Key
⌥	Option Key	Alt Key
⇧	Shift Key	Shift Key
↵	Return Key	Enter Key
⏏	Eject Key	Eject Key
⌫	Delete key (back delete on Portables)	Backspace Key

Keyboard shortcuts

Key Stroke	Name
⌘C	Copy
⌘V	Paste
⌘⌥V	Cut Paste, when used with ⌘C
⌘⌥⏻	Sleep
⌘⌥⏻⏻	Shut Down
⌘Q	Log out
⌘Q	Quit Application
⌘W	Close Window
⌘ tab	Cycle through windows. Similar to alt tab in windows
⌘T	New Tab
⌘~	Cycle though windows of the same applications
⌘{	Page back
⌘}	Page forward

Mac Keyboard Shortcuts

<https://support.apple.com/en-in/HT201236>

Xcode keyboard shortcuts

Key Stroke	Name
⌘,	Preferences
⌘N	New File
⇧⌘N	New project
^⌘N	New workspace
⌘⌥C	Commit
⇧⌘F	Find in workspace
⌘L	Reveal in project navigator
⌘R	Run
⌘T	Test
⌘I	Profile (Bring up instruments)
⌘B	Build
⇧⌘K	Clean
⌘⇧⌘K	Clean build folder

⌘.

Stop

⌘B

Analyse

Appendix C

Appendix C: Knowledge Articles

This chapter contains a list of articles that I have written¹.

¹ For a complete list of articles visit my website: www.arunpatwardhan.com

Programming

This section contains articles related to Swift Programming Language.

Links to Knowledge articles

<https://arunpatwardhan.com/2017/11/09/adding-formatted-text-to-swift-in-xcode/>

<https://arunpatwardhan.com/2018/07/16/migrating-to-swift-from-objective-c/>

<https://arunpatwardhan.com/2014/12/06/clarifying-swift-objective-c/>

<https://arunpatwardhan.com/2018/04/09/using-swift-package-manager/>

<https://arunpatwardhan.com/2018/03/27/update-swift-on-linux/>

<https://arunpatwardhan.com/2016/01/23/writing-swift-programs-on-linux/>

<https://arunpatwardhan.com/2017/04/12/understanding-constructors-initialization-in-swift/>

<https://arunpatwardhan.com/2017/02/27/collection-type-sequence-type-indexable-type-update/>

<https://arunpatwardhan.com/2016/08/20/collection-type-sequence-type-indexable-type/>

<https://arunpatwardhan.com/2017/02/07/when-to-use-swift-when-to-use-objective-c/>

Programming Standards

This section contains articles related to Programming Standards.

Links to knowledge articles

<https://arunpatwardhan.com/2018/07/20/programming-style-guide-command-query-separation/>

<https://arunpatwardhan.com/2017/12/24/programming-style-guide-documentation/>

<https://arunpatwardhan.com/2017/10/17/programming-style-guide-code-refactoring/>

<https://arunpatwardhan.com/2017/09/21/programming-style-guide-the-need-for-programming-standards/>

<https://arunpatwardhan.com/2017/09/21/programming-style-guide-naming-conventions/>

Application Development

This section contains articles related to App Development.

Links to knowledge articles

APP DEVELOPMENT

<https://arunpatwardhan.com/2016/08/06/creating-frameworks-for-iosos-x-app-development/>
<https://arunpatwardhan.com/2016/04/01/loading-your-app-on-your-iphone/>
<https://arunpatwardhan.com/2014/10/31/ios-developer-programs-explained/>

DEVELOPER TOOLS

<https://arunpatwardhan.com/2014/06/10/configuring-an-svn-server-on-os-x-on-your-local-network/>
<https://arunpatwardhan.com/2019/01/04/creating-your-own-drag-and-drop-dmg/>
<https://arunpatwardhan.com/2021/03/25/creating-custom-templates-for-ios-app-development/>

UI/UX

<https://arunpatwardhan.com/2019/07/28/creating-ios-apps-without-storyboard-part-1/>
<https://arunpatwardhan.com/2018/12/08/creating-reusable-ui-components-for-ios-app-development/>
<https://arunpatwardhan.com/2013/07/26/to-use-interface-builder-or-not-to-use-interface-builder/>
<https://arunpatwardhan.com/2019/09/19/creating-ios-apps-without-storyboard-part-2/>

Command Line

This section contains articles related to Command line in macOS.

Links to knowledge articles

COMMAND LINE

<https://arunpatwardhan.com/2014/01/17/terminal-commands-for-os-x-basic/>

<https://arunpatwardhan.com/2014/02/12/terminal-commands-for-os-x-part-2/>

<https://arunpatwardhan.com/2014/03/19/terminal-commands-part-3/>

<https://arunpatwardhan.com/2021/03/27/useful-scripts-for-macos/>

<https://arunpatwardhan.com/2021/07/29/list-of-macos-terminal-commands/>

Appendix D

Appendix D: Apple Developer Portal

This chapter contains a list of articles found on the Apple Developer portal.

Programming Languages

This section contains articles related to the Swift programming Language.

Links to support articles

SWIFT

<https://developer.apple.com>

<https://developer.apple.com/swift/>

<https://developer.apple.com/swift/resources/>

<https://developer.apple.com/swift/blog/>

<https://swift.org>

https://developer.apple.com/documentation/swift/migrating_your_objective-c_code_to_swift

Tools

This section contains articles related to the the different tools provided by Apple.

Links to support articles

TOOLS

<https://developer.apple.com/xcode/>

<https://developer.apple.com/testflight/>

<https://developer.apple.com/design/resources/>

Documentation

This section contains articles related to the Swift programming Language.

Links to support articles

DOCUMENTATION

<https://developer.apple.com/documentation/>

<https://developer.apple.com/videos/>

Appendix E

Appendix E: Third party tools

This chapter contains a list of third party tools you might encounter.

This list is not a complete or comprehensive list of applications and tools. Nor is it an endorsement of any product. Please perform the necessary research and due diligence before using any of these products in the real world environment.

Microsoft

Office

<https://www.microsoft.com/en-in/microsoft-365/mac/microsoft-365-for-mac>

Skype

<https://www.skype.com/en/get-skype/>

Skype for Business

<https://www.microsoft.com/en-us/download/details.aspx?id=54108>

Edge

<https://www.microsoft.com/en-us/edge>

Visual Studio

<https://visualstudio.microsoft.com/vs/mac/>

Microsoft Remote Desktop

<https://apps.apple.com/us/app/microsoft-remote-desktop/id1295203466?mt=12>

OneDrive

<https://apps.apple.com/us/app/onedrive/id823766827?mt=12>

OneNote

<https://apps.apple.com/us/app/microsoft-onenote/id784801555?mt=12>

Defender

<https://docs.microsoft.com/en-us/microsoft-365/security/defender-endpoint/microsoft-defender-endpoint-mac?view=o365-worldwide>

Teams

<https://www.microsoft.com/en-us/microsoft-teams/download-app>

Google

Chrome

<https://www.google.com/chrome/>

Drive

<https://www.google.com/drive/download/>

Google Hangouts

<https://hangouts.google.com>

Adobe

Creative Cloud

[https://www.adobe.com/in/creativecloud.html?](https://www.adobe.com/in/creativecloud.html?sdid=SL4KMHQ2&mv=search&ef_id=8d4ce78e562f1aee261c875cee769e73:G:s&s_kwcid=AL!3085!10!79027536543631!79027586718493)

[sdid=SL4KMHQ2&mv=search&ef_id=8d4ce78e562f1aee261c875cee769e73:G:s&s_kwcid=AL!
3085!10!79027536543631!79027586718493](https://www.adobe.com/in/creativecloud.html?sdid=SL4KMHQ2&mv=search&ef_id=8d4ce78e562f1aee261c875cee769e73:G:s&s_kwcid=AL!3085!10!79027536543631!79027586718493)

Acrobat Reader

<https://get.adobe.com/reader/otherversions/>

Photoshop

[https://www.adobe.com/in/products/photoshop.html?](https://www.adobe.com/in/products/photoshop.html?sdid=SGDJMMG3&mv=search&ef_id=4dbe8e0baaa510e4c982eed912025864:G:s&s_kwcid=AL!3085!10!79714666885825!79714781276411)

[sdid=SGDJMMG3&mv=search&ef_id=4dbe8e0baaa510e4c982eed912025864:G:s&s_kwcid=AL!
3085!10!79714666885825!79714781276411](https://www.adobe.com/in/products/photoshop.html?sdid=SGDJMMG3&mv=search&ef_id=4dbe8e0baaa510e4c982eed912025864:G:s&s_kwcid=AL!3085!10!79714666885825!79714781276411)

<https://apps.apple.com/in/app/adobe-photoshop-elements-2021/id1531432460?mt=12>

Lightroom

<https://apps.apple.com/us/app/adobe-lightroom/id1451544217?mt=12>

Mozilla

Firefox

<https://www.mozilla.org/en-US/firefox/mac/>

Thunderbird

<https://support.mozilla.org/en-US/kb/installing-thunderbird-on-mac>

VMWare

VMWare Fusion

<https://www.vmware.com/products/fusion.html>

Workspace One

<https://www.vmware.com/products/workspace-one.html>

Virtualization

Parallels Desktop

<https://www.parallels.com/products/desktop/>

Oracle VirtualBox

<https://www.virtualbox.org/wiki/Downloads>

Meetings and conferencing

Webex

<https://www.webex.com/downloads.html/>

Zoom

<https://zoom.us/download>

Communication and messaging

Whatsapp

<https://apps.apple.com/us/app/whatsapp-desktop/id1147396723?mt=12>

Telegram

<https://macos.telegram.org>

Slack

<https://slack.com/intl/en-in/downloads/mac?geocode=en-in>

Multimedia & creativity

VLC

<https://www.videolan.org/vlc/download-macosx.html>

GIMP

<https://www.gimp.org/downloads/>

Software development and text editing

Atom

<https://atom.io>

Coderunner

<https://coderunnerapp.com>

BEdit

<https://apps.apple.com/us/app/bbedit/id404009241?mt=12>

Eclipse

<https://www.eclipse.org/downloads/?osType=macosx>

Emacs

<http://emacsformacosx.com>

Collaboration and utilities

Evernote

<https://evernote.com/download/>

<https://apps.apple.com/us/app/evernote/id406056744?mt=12>

Opera

<https://www.opera.com/download>

Open Office

<http://www.openoffice.org/porting/mac/>

Libre Office

<https://www.libreoffice.org/get-help/install-howto/macos/>

1Password

<https://1password.com/downloads/mac/>

Box

<https://www.box.com/resources/downloads>

https://app.box.com/services/browse/official/box_sync_for_mac

Dropbox

<https://www.dropbox.com/desktop>

Screen sharing & remote support

Teamviewer

<https://www.teamviewer.com/en-us/download/mac-os/>

RealVNC

<https://www.realvnc.com/en/connect/download/vnc/macos/>

<https://www.realvnc.com/en/connect/download/viewer/macos/>

Reflector

<https://www.airquirrels.com/reflector>

MDM Solutions

Profile Manager

<https://support.apple.com/en-au/guide/profile-manager/welcome/mac>

Jamf Pro

<https://www.jamf.com>

SimpleMDM

<https://simplemdm.com>

Fleetsmith

<https://www.fleetsmith.com>

Mosyle

<https://mosyle.com>

Maas 360

<https://www.ibm.com/docs/en/maas360?topic=introducing-maas360-mobile-device-management-saas>

Mobile Iron

<https://www.mobileiron.com/en>

42Gears

<https://www.42gears.com>

Jamf Now

<https://login.jamfnow.com>

DEPNotify

<https://gitlab.com/Mactroll/DEPNotify>

SplashBuddy

<https://github.com/macadmins/SplashBuddy>

osquery

<https://osquery.io>

Security and Endpoint Solutions

Jamf Protect

<https://www.jamf.com/products/jamf-protect/>

OSQuery

<https://osquery.io>

Symantec VIP

<https://vip.symantec.com>

SAP Privileges

<https://github.com/SAP/macOS-enterprise-privileges>

Profile creation

iMazing Profile Creator

<https://apps.apple.com/in/app/imazing-profile-editor/id1487860882?mt=12>

PPPC Utility

<https://github.com/jamf/PPPC-Utility>

Software update management

Macadmins software

<https://macadmins.software>

SUPERMAN Utility

<https://github.com/Macjutsu/super>

MIST - macOS Installer Super tool

<https://github.com/ninxsoft/Mist>

Software management

Google Santa software

<https://github.com/google/santa>

Serial Number generator

<https://github.com/sickcodes/osx-serial-generator>

Apparency

<https://www.mothersruin.com/software/Apparency/>

Packages

<http://s.sudre.free.fr/Software/Packages/about.html>

Iceberg

<http://s.sudre.free.fr/Software/Iceberg.html>

Dockutil

<https://github.com/kcrawford/dockutil>

SAP Icons app

<https://github.com/SAP/macOS-icon-generator>

Automation

Launchd generator

<https://zerolaunched.herokuapp.com>

Download/Documentation links

The links are to either download points or documentation. This list is neither complete nor exhaustive.

<https://cocoapods.org>

<https://github.com/ReactiveX/RxSwift>

<http://reactivex.io>

<https://www.ibm.com/in-en/cloud/swift>

<https://developer.ibm.com/swift/>

<https://github.com/IBM-Swift/Kitura>

<http://online.swiftplayground.run>

<https://github.com/realm/jazzy>

<https://objectivec2swift.com/#/converter/code/>

<https://swiftify.com>

<https://iswift.org/try>

<https://fastlane.tools>

Static Analysis

<https://github.com/realm/SwiftLint>

<https://github.com/sleekbyte/tailor>

<http://fauxpasapp.com>

Testing

OCMock

<https://ocmock.org>

OCMockito

<https://github.com/jonreid/OCMockito>

sMock

<https://github.com/Alkenso/sMock>

MockingBird

<https://github.com/birdrides/mockinbird>

Cuckoo

<https://github.com/Brightify/Cuckoo>

SwiftMocky

<https://github.com/MakeAWishFoundation/SwiftyMocky>

SwiftMockGeneratorForXcode

<https://github.com/seanhenry/SwiftMockGeneratorForXcode>

API Communication

GraphQL

<https://graphql.org/code/#swift-objective-c>

Contact

For any queries, corrections at the following

Website	www.amaranthine.in/contact-us
Email	arun@amaranthine.co.in
Facebook	https://www.facebook.com/amaranthinelabs
LinkedIn	https://www.linkedin.com/company/9410642? trk=tyah&trkInfo=clickedVertical%3Acompany%2CclickedEntityId%3A9410642%2 Cidx%3A1-1-1%2CtarId%3A1438164427255%2Ctas%3Aamaranthine
Twitter	https://twitter.com/amaranthineTech
Youtube	https://www.youtube.com/channel/UC127UHd8V7bxPQYnd9QrN8w
Flipboard	https://flipboard.com/@AmaranthineTech
Instagram	https://www.instagram.com/amaranthinetech/

