

Building iOS Apps

Max Humber x O'Reilly

Agenda

- "SwiftUI Thinking"
- Working with Components & Modifiers
- Using State & Interaction
- Separating out "Business Logic"
- "Tech Sludge" & Refactoring
- App-to-Store Guide*

*Time Permitting, Guide Attached!

Not Covered

If you want me to do a course on any of these tell O'Reilly!!

- Architecture
- MVVM
- Networking
- Animations
- GameKit
- Integrating UIKit
- Testing

The 90%

Components

- VStack
- HStack
- ZStack
- Spacer
- Rectangle
- Button
- Color
- Text
- Image
- GeometryReader

Modifiers

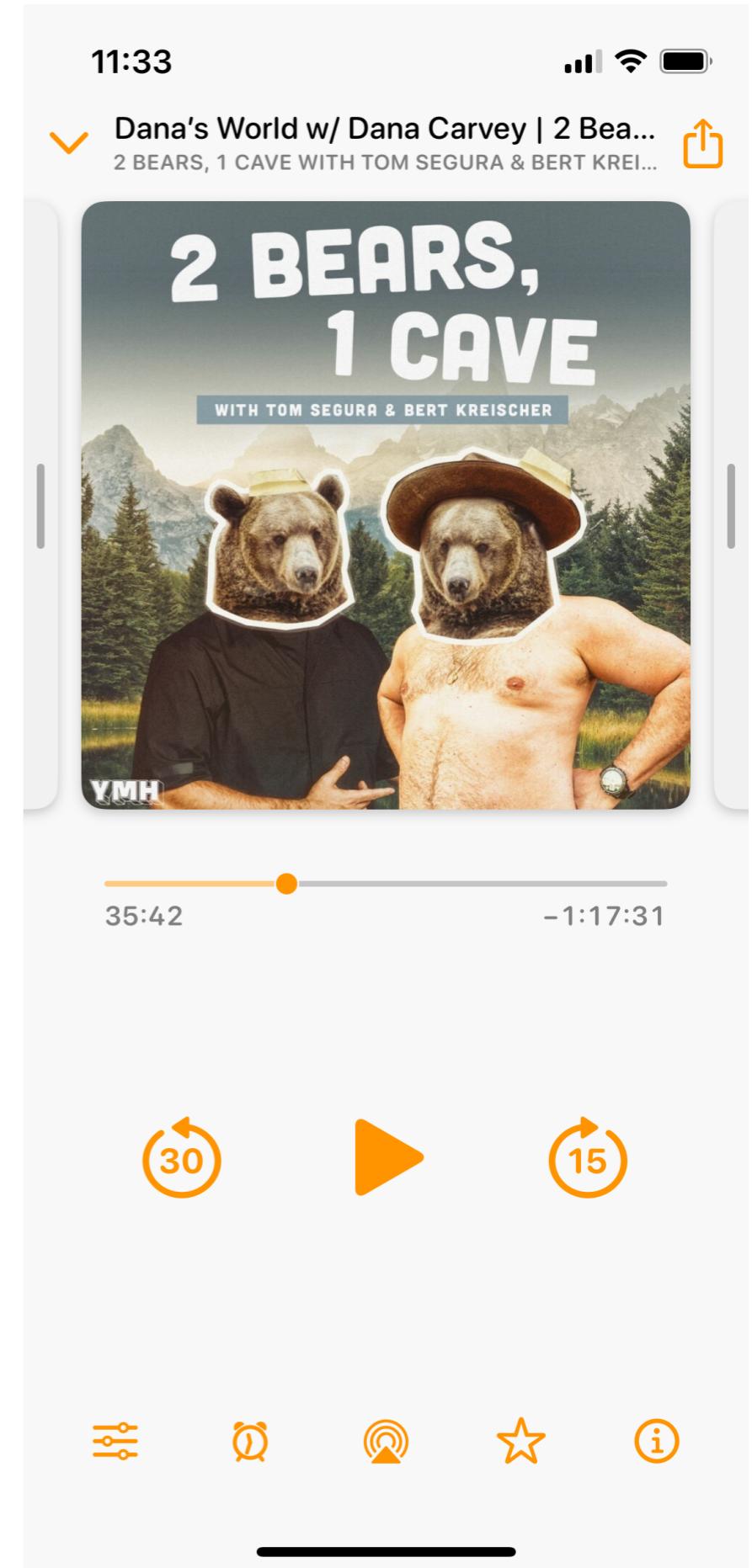
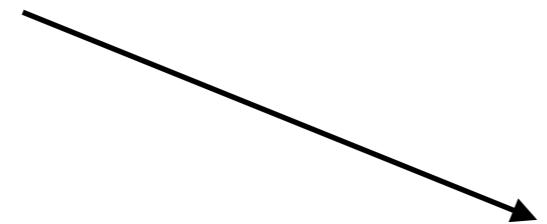
- .foregroundColor
- .padding
- .font
- .frame
- .lineLimit
- .tint
- .aspectRatio
- .background
- .hidden
- .onTapGesture

There are so so so so many more!!

Learn SwiftUI

The best way to learn SwiftUI...

Recreate a screen in one of your favourite apps!



@@ <https://overcast.fm>

Overcast

Overcast is a self-funded app that has sustainably succeeded on its merits and respected your privacy for the last 8 years. Free You can optionally hide them for \$10/year.

[Log In](#)

Email-based accounts. Most Overcast accounts do not have email addresses...

[Ads](#)

Overcast reserves the right to reject an ad for any reason, such as (but not...

[Create Account](#)

Create Account - Overcast

[Podcaster Info](#)

Overcast uses server-side crawling, centrally fetching your RSS feed for all...

[Forecast](#)

Forecast ® podcast MP3 encoder with chapters. NOTE: Forecast is still a beta...

[Contact](#)

I run Overcast with no other employees, no VC funding, and a sustainable work...

Let's Code!

App-to-Store

2023 Edition

0. Build for Review

!! Look at the [App Store Review Guidelines](#) before you finish your app !!

[News](#)[Discover](#)[Design](#)[Develop](#)[Distribute](#)[Support](#)[Account](#)[App Store](#)[Overview](#)[What's New](#)[Features](#)[Articles](#)[Guidelines](#)

App Store Review Guidelines

Apps are changing the world, enriching people's lives, and enabling developers like you to innovate like never before. As a result, the App Store has grown into an exciting and vibrant ecosystem for millions of developers and more than a billion users. Whether you are a first time developer or a large team of experienced programmers, we are excited that you are creating apps for the App Store and want to help you understand our guidelines so you can be confident your app will get through the review process quickly.

Introduction

Before You Submit

1. Safety
2. Performance
3. Business
4. Design

Introduction

The guiding principle of the App Store is simple—we want to provide a safe experience for users to get apps and a great opportunity for all developers to be successful. We do this by offering a highly curated App Store where every app is reviewed by experts and an editorial team helps users discover new apps every day. For everything else there is always the open Internet. If the

1. Apple ID

Create an [Apple ID](#) (skip if you already have one)

[Store](#)[Mac](#)[iPad](#)[iPhone](#)[Watch](#)[AirPods](#)[TV & Home](#)[Only on Apple](#)[Accessories](#)[Support](#)

Apple ID

[Sign In](#)[Create Your Apple ID](#)[FAQ](#)

Create Your Apple ID

One Apple ID is all you need to access all Apple services.

You already have an Apple ID? [Find it here >](#)

 first name last name

COUNTRY / REGION

 Canada date of birth name@example.com

This will be your new Apple ID

2. Apple Developer Program

Sign up for the [Apple Developer Program](#) with your Apple ID

Apple Developer Program

Overview

What's Included

Enroll

From Code to Customer

Join the Apple Developer Program to reach customers around the world on the App Store for iPhone, iPad, Mac, Apple Watch, and Apple TV. Membership includes all the tools, resources, and support you need to develop and distribute apps, including access to beta software, app services, testing tools, app analytics, and more.



Get the latest betas.

The incredibly rapid adoption rate of new software by Apple customers means you'll want to integrate the latest innovative Apple technologies into your apps quickly, so they'll seamlessly integrate with the latest advances in iOS, iPadOS, macOS,

3. App Store Connect

Sign into and get familiar with [App Store Connect](#)

App Store Connect

Max Humber ▾
Bracket Ltd.



My Apps

Manage and Create



App Analytics



Sales and
Trends



Payments and
Financial
Reports



Users and
Access



Agreements,
Tax, and Banking



4. New App

Create a **New App** by clicking the "+" Button

App Store Connect

Apps Analytics Trends Reports Users and Access Agreements Max Humber Bracket Ltd.

Apps + ⋮

All Statuses

New App

New App Bundle

IOS 1.0 Prepare for Submission

Oolong

IOS 2.02 Ready for Sale

Ponkan

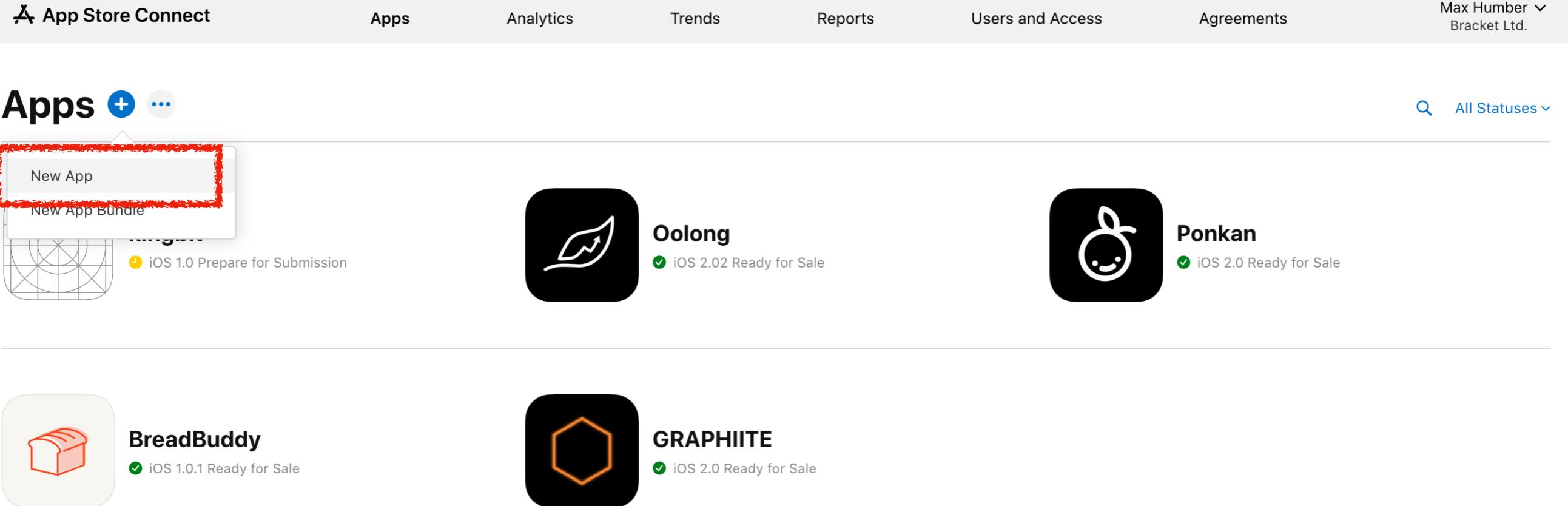
IOS 2.0 Ready for Sale

BreadBuddy

IOS 1.0.1 Ready for Sale

GRAPHIITE

IOS 2.0 Ready for Sale



5. New App Form

Fill out the form (the Bundle ID should be automatic and the SKU doesn't really matter...)

App Store Connect

Apps Analytics Trends Reports Users and Access Agreements Max Humber Bracket Ltd.

Apps + ⋮

All Statuses

New App

Platforms ?
 iOS macOS tvOS

Name ?
30

Primary Language ?
Choose

Bundle ID ?
Loading... Certificates, Identifiers & Profiles.

SKU ? Might need to create on here if it doesn't autocomplete

User Access ?
 Limited Access Full Access

Cancel Create

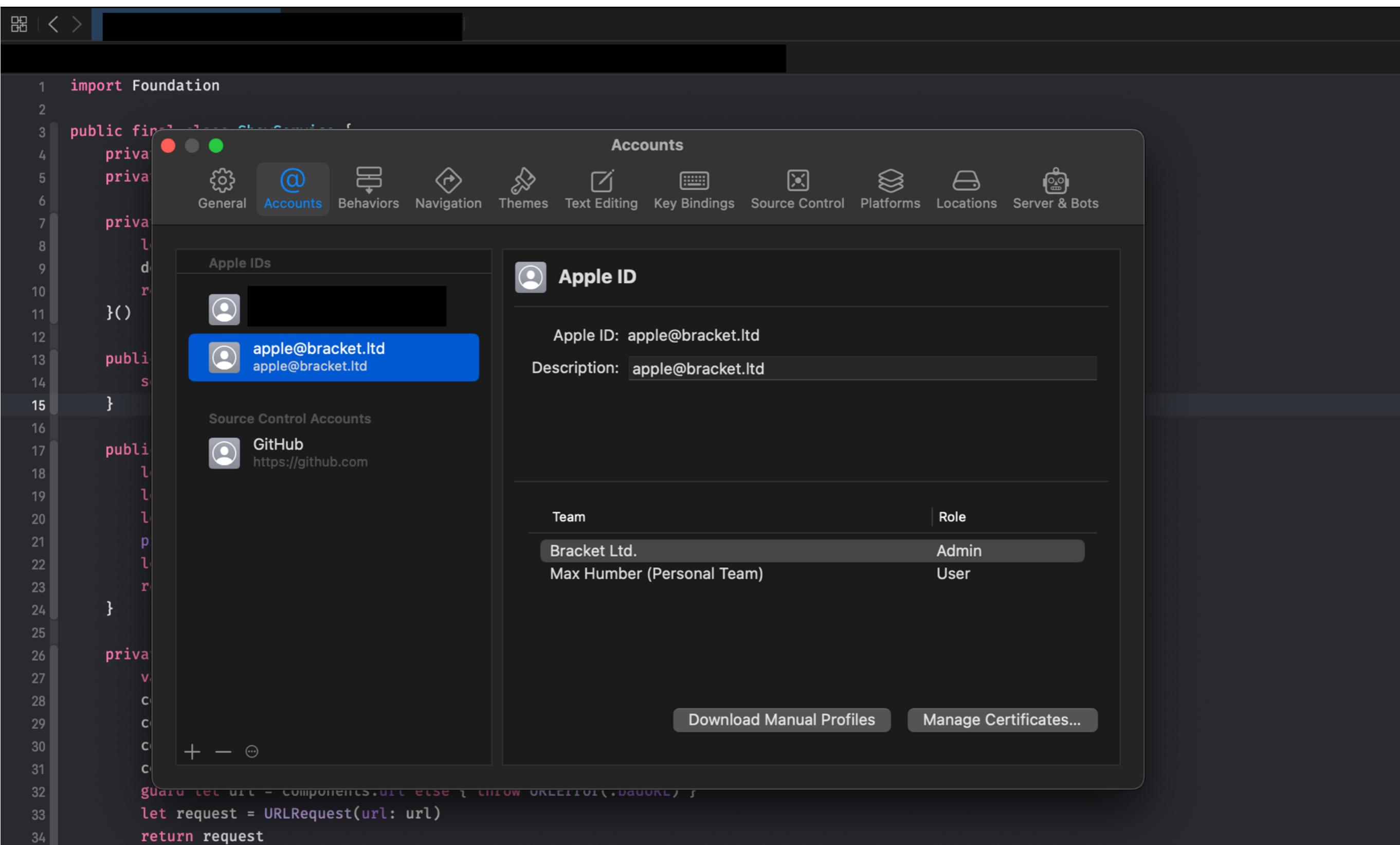
kingbit
iOS 1.0 Prepare for Submission

BreadBuddy
iOS 1.0.1 Ready for Sale

Ponkan
iOS 2.0 Ready for Sale

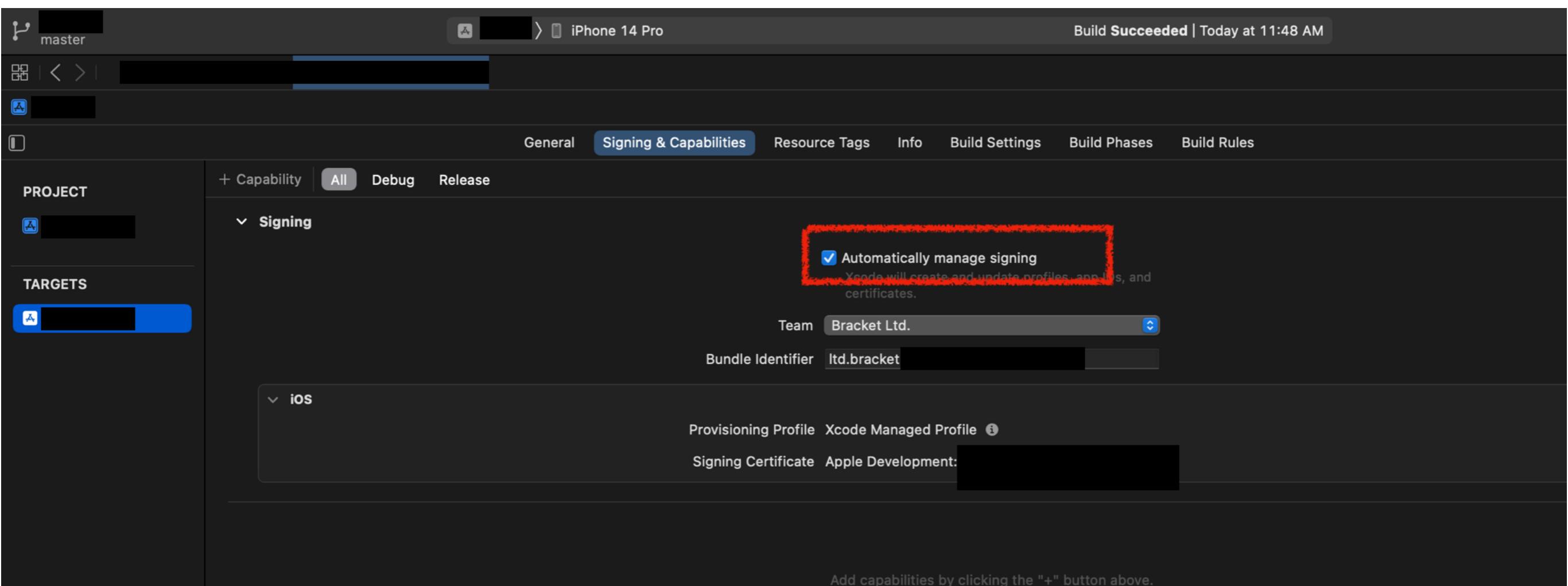
6. Configure Account

Add developer account to Xcode (Preferences > Accounts)



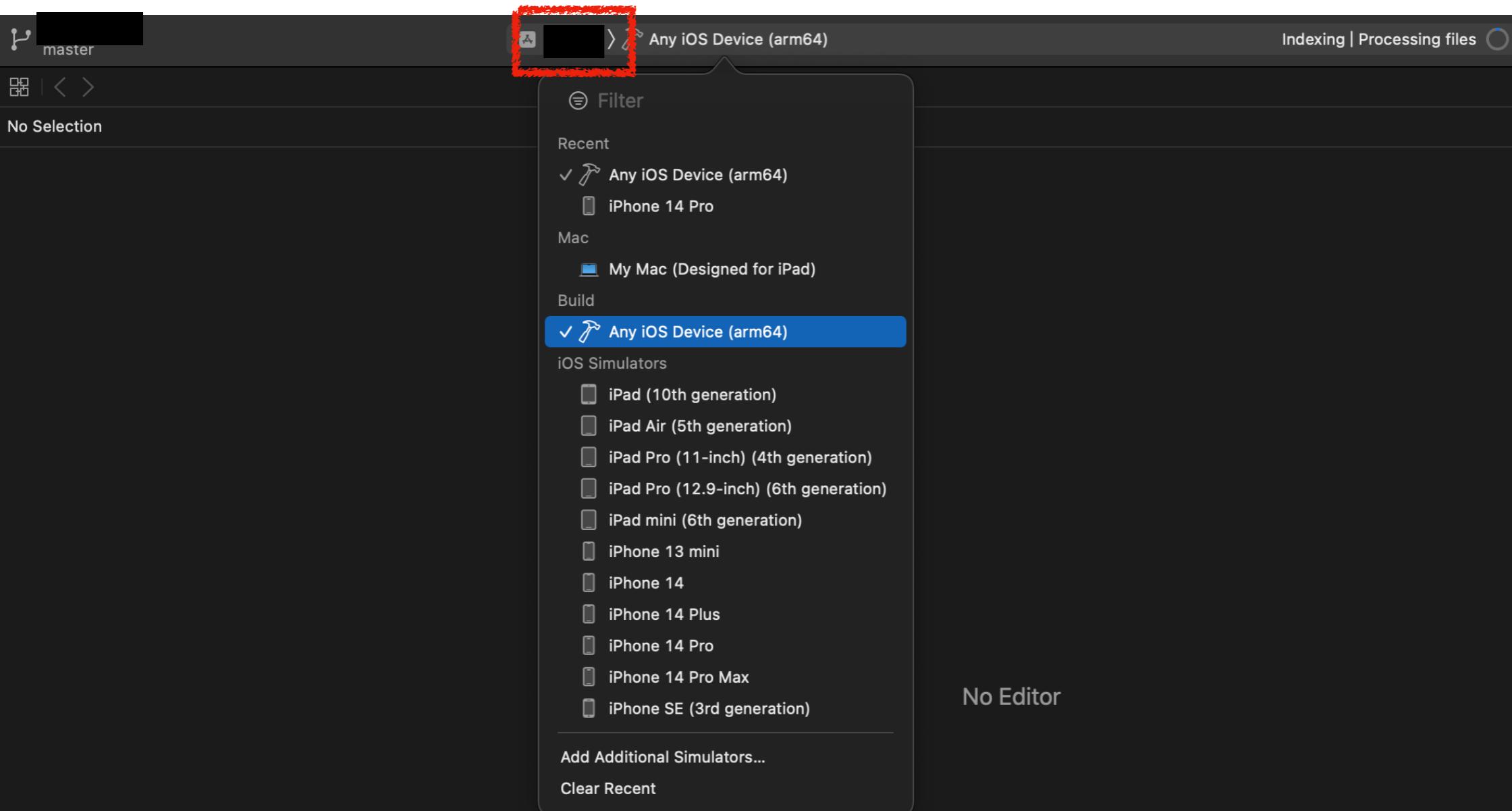
7. Code Signing

Target > Signing & Capabilities; checkmark "Automatically manage signing"



8. Build

Switch into build for "Any iOS Device (arm64)



9. Archive

Product > Archive

Editor Product Debug Source Control Window Help

Any iOS Device (arm64)

Archive Succeeded | Today at 4:21 PM 2

Run ⌘ R

Test ⌘ U

Profile ⌘ I

Analyze ⌘ ⌂ B

Archive

Build For >

Perform Action >

Build ⌘ B

Clean Build Folder ⌘ ⌂ K

Clean Test Results ⌘ ⌂ K

Clear All Issues

Stop ⌘ .

Show Build Folder in Finder

Export Localizations...

Import Localizations...

Scheme >

Destination >

Test Plan >

Xcode Cloud >

Battery Usage

Disk Writes

Hang Rate

Launch Time

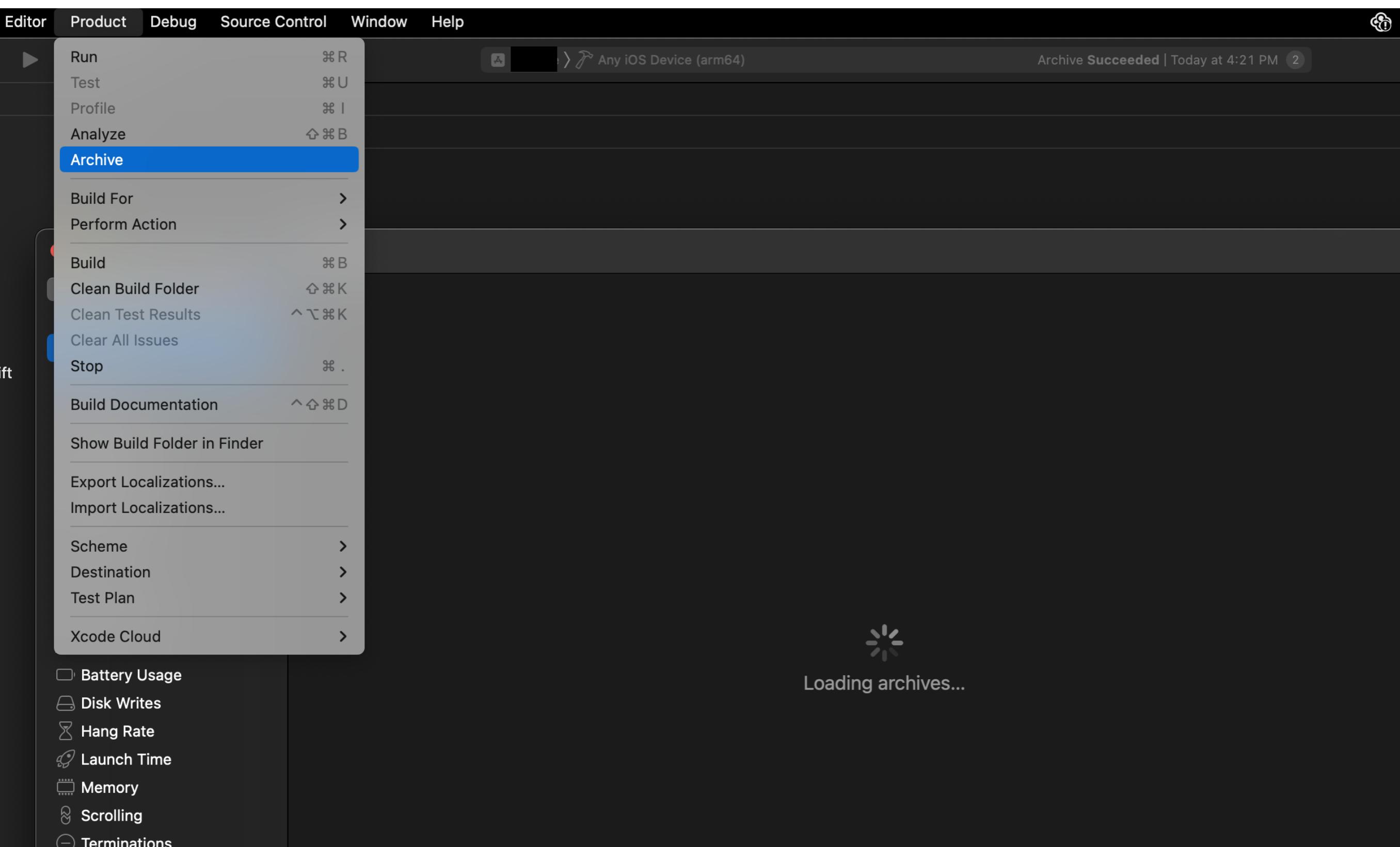
Memory

Scrolling

Terminations

ft

Loading archives...



10. Distribute App

After Archiving this screen will pop up... click "Distribute App"

The screenshot shows the Xcode Organizer interface. On the left, there's a sidebar with various monitoring and reporting tools like Crashes, Disk Writes, Energy, Feedback, Hangs, Insights, Regressions, Metrics, Battery Usage, Disk Writes, Hang Rate, Launch Time, Memory, Scrolling, and Terminations. The main area is titled 'Archives' and displays a table of archived builds. A message at the top of the table says 'Make sure to bump version number or upload will fail!!'. The table has columns for Name, Creation Date, Version, and Status. One row is selected, showing 'Release' as the name, 'Feb 22, 2023 at 4:22 PM' as the creation date, '1.0 (6)' as the version, and '-' as the status. This row is highlighted with a red box. To the right of the table, there are two large buttons: 'Distribute App' and 'Validate App', with 'Distribute App' also highlighted with a red box. Below these buttons is a 'Details' section showing the app's version as 'Version 1.0 (6)', identifier as 'Identifier ltd.bracket.kingbit', type as 'Type iOS App Archive', team as 'Team Bracket Ltd.', and architectures as 'Architectures arm64'. At the bottom, there's a 'Download Debug Symbols' button and a 'Description' section with a note 'No Description'.

Name	Creation Date	Version	Status
Release	Feb 22, 2023 at 4:22 PM	1.0 (6)	-
Release	Feb 21, 2023 at 1:06 PM	1.0 (6)	✓ Uploaded
kingbit (iOS)	Feb 17, 2023 at 10:26 AM	1.0 (5)	✓ Uploaded
kingbit (iOS)	Feb 16, 2023 at 8:31 PM	1.0 (4)	✓ Uploaded
kingbit (iOS)	Feb 16, 2023 at 8:00 PM	1.0 (3)	✓ Uploaded
kingbit (iOS)	Jan 24, 2023 at 8:37 AM	1.0 (1)	✓ Uploaded

Distribute App

Validate App

Details

Version 1.0 (6)
Identifier ltd.bracket.kingbit
Type iOS App Archive
Team Bracket Ltd.
Architectures arm64

Description

No Description

11. Distribution Method

Choose "App Store Connect" and keep "Next-ing" through the screens...

The screenshot shows the Xcode interface during an archive process. The top status bar indicates "Release > Any iOS Device (arm64)" and "Archive Succeeded | Today at 4:22 PM". The main window displays the code for `HowToPlayView.swift`. On the left, the sidebar shows various developer tools like Metrics, Insights, and Reports. The central area shows the "Archives" table with four entries:

Name	Creation Date	Version	Status
Release	Feb 22, 2023 at 4:22 PM	1.0 (6)	-
Release	Feb 21, 2023 at 1:06 PM	1.0 (6)	✓ Uploaded
kingbit (iOS)	Feb 17, 2023 at 10:26 AM	1.0 (5)	✓ Uploaded

A modal dialog titled "Select a method of distribution:" is open, listing four options:

- App Store Connect
Distribute on TestFlight and the App Store.
- Ad Hoc
Install on designated devices.
- Enterprise
Distribute to your organization.
- Development
Distribute to members of your team.

The "App Store Connect" option is highlighted with a red border. At the bottom of the dialog are "Cancel", "Previous", and "Next" buttons, with "Next" being highlighted with a red border.

On the right side of the screen, there are "Details" sections for the app, including Version 1.0 (6), Identifier ltd.bracket.kingbit, Type iOS App Archive, Team Bracket Ltd., and Architectures arm64. There are also "Distribute App" and "Validate App" buttons.

12. Upload

Hit "Upload" after you've gone through all the screens!

The screenshot shows the Xcode interface during the archive process. The top status bar indicates "Release > Any iOS Device (arm64)" and "Archive Succeeded | Today at 4:22 PM". The main area displays the file structure under "kingbit" and the code content of "HowToPlayView.swift". On the left, the sidebar shows various developer tools like Product, Archives, Reports, and Insights. The central "Archives" table lists four previous builds, all marked as "Uploaded". A modal window titled "Review kingbit.ipa content:" is open, showing details about the current build: Team: Bracket Ltd., Certificate: Cloud Managed Apple Distribution (Expires 2023-04-25), Profile: iOS Team Store Provisioning Profile: ltd.bracket.kingbit (Expires 2023-04-25), Symbols: Included, Architectures: arm64, Version: 1.0 (7). The "Details" panel on the right provides summary information: Version 1.0 (6), Identifier ltd.bracket.kingbit, Type iOS App Archive, Team Bracket Ltd., Architectures arm64. At the bottom of the modal, there are "Cancel", "Previous", and "Upload" buttons, with "Upload" being highlighted with a red box.

kingbit
master

Release > Any iOS Device (arm64)

Archive Succeeded | Today at 4:22 PM

Nessa.swift HowToPlayView.swift

kingbit > kingbit > Interface > Screens > HowToPlay > HowToPlayView.swift > HowToPlayView

1 import SwiftUI
2 import WebKit
3 import Core

Release (ltd.bracket.ki...)

Products

Archives

Reports

Crashes

Disk Writes

Energy

Feedback

Hangs

Insights

Regressions

Metrics

Battery Usage

Disk Writes

Hang Rate

Launch Time

Memory

Scrolling

Terminations

Archives

Name	Creation Date	Version	Status
Release	Feb 22, 2023 at 4:22 PM	1.0 (6)	-
Release	Feb 21, 2023 at 1:06 PM	1.0 (6)	Uploaded
kingbit (iOS)	Feb 17, 2023 at 10:26 AM	1.0 (5)	Uploaded
kingbit (iOS)	Feb 16, 2023 at 8:31 PM	1.0 (4)	Uploaded

Distribute App

Validate App

Review kingbit.ipa content:

kingbit.app

kingbit.app

SUMMARY

Team: Bracket Ltd.

Certificate: Cloud Managed Apple Distribution (Expires 2023-04-25)

Profile: iOS Team Store Provisioning Profile: ltd.bracket.kingbit (Expires 2023-04-25) ⓘ

Symbols: Included

Architectures: arm64

Version: 1.0 (7)

ENTITLEMENTS

com.apple.developer.game-center
true

application-identifier

Cancel Previous Upload

Version 1.0 (6)
Identifier ltd.bracket.kingbit
Type iOS App Archive
Team Bracket Ltd.
Architectures arm64

Download Debug Symbols

Description

No Description

13. App Information

App Store Connect > App Information ... complete the basics

App Store Connect Apps Analytics Trends Reports Users and Access Agreements Max Humber ▾
Bracket Ltd.

kingbit ▾ App Store Services TestFlight Xcode Cloud

iOS App App Information Save

1.0 Prepare for Submission

This information is used for all platforms of this app. Any changes will be released with your next app version.

Add macOS App Add tvOS App Localizable Information English (Canada) ▾ ?

General App Information (selected) Name ?
kingbit

Pricing and Availability Subtitle ?
23

App Privacy Ratings and Reviews Version History App Review

Features General Information

In-App Purchases Subscriptions Primary Language ?
English (Canada)

App Store Promotions Custom Product Pages Category ?

Itd.bracket [REDACTED]

In-App Events SKU ?
[REDACTED] Primary

Product Page Optimization Apple ID ?
[REDACTED] Secondary (optional)

Content Rights ?

[REDACTED]

14. Define Rights / Rating

Fill out Content Rights and Age Rating forms

kingbit ▾ [App Store](#) [Services](#) [TestFlight](#) [Xcode Cloud](#)

iOS App

1.0 Prepare for Submission

[Add macOS App](#)

[Add tvOS App](#)

General

[App Information](#) Selected

[Pricing and Availability](#)

[App Privacy](#)

[Ratings and Reviews](#)

[Version History](#)

[App Review](#)

Features

[In-App Purchases](#)

[Subscriptions](#)

[App Store Promotions](#)

[Custom Product Pages](#)

[In-App Events](#)

[Product Page Optimization](#)

App Information

This information is used for all platforms of this app. Any changes will be released with your next app version.

[Content Rights](#) ?

[Set Up Content Rights Information](#)

Age Rating ?

[Set Age Rating Across All Platforms](#)

License Agreement [Edit](#)
[Apple's Standard License Agreement](#)

App-Specific Shared Secret

The app-specific shared secret is a unique code to receive receipts for only this app's auto-renewable subscriptions. You may want to use an app-specific shared secret if you're transferring this app to another developer, or if you want to keep your primary shared secret private.

[Manage](#)

Additional Information

[View on App Store](#)

[Edit User Access](#)

[Remove App](#)

15. Pricing and Availability

Choose Price and Availability (IAP are separate)

 App Store Connect Apps Analytics Trends Reports Users and Access Agreements Max Humber ▾ Bracket Ltd.



iOS App

⌚ 1.0 Prepare for Submission

Add macOS App

Add tvOS App

General

App Information

Pricing and Availability

App Privacy

Ratings and Reviews

Version History

App Review

Features

In-App Purchases

Subscriptions

App Store Promotions

Custom Product Pages

In-App Events

Product Page Optimization

Pricing and Availability

Save

Price Schedule

All Prices and Currencies

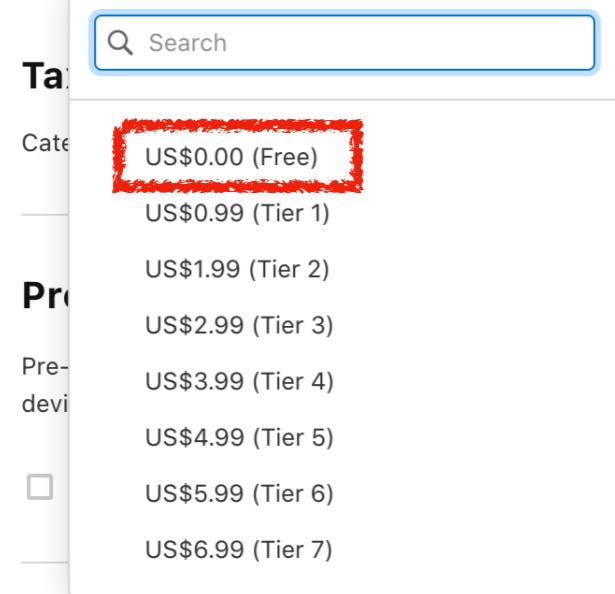
PRICE ?

START DATE ?

END DATE ?

Choose...

-



Availability

To view your availability options, choose a price first.

16. App Privacy

Fill out the Privacy Form and add a Privacy Policy URL (unfortunately you need one)

App Store Connect Apps Analytics Trends Reports Users and Access Agreements Max Humber ▾ Bracket Ltd.

kingbit ▾ App Store Services TestFlight Xcode Cloud

iOS App 1.0 Prepare for Submission Publish

Add macOS App English (Canada)
Add tvOS App

General

App Information
Pricing and Availability
App Privacy (highlighted)
Ratings and Reviews
Version History
App Review

Features

In-App Purchases
Subscriptions
App Store Promotions
Custom Product Pages
In-App Events
Product Page Optimization

App Privacy

Privacy Policy Edit

Privacy Policy URL ? - User Privacy Choices URL (Optional) ? -

The App Store is designed to be a safe and trusted place for people to discover apps from talented developers just like you. Your app can influence culture and change lives, so that's why we're counting on you to help us protect users' privacy.

After clicking Get Started, you'll be asked to provide some information about your app's data collection practices. This information will appear on your app's product page, where users can see what data your app collects and how it's used.

Get Started

17. Screenshots

Add Screenshots ([specs](#)) ... the most annoying part!

kingbit ▾ App Store Services TestFlight Xcode Cloud

iOS App iOS App 1.0 1.0 Prepare for Submission Save Add for Review

Add macOS App Version Information English (Canada) ?

Add tvOS App

The product page for this app version will be published on the App Store with the assets and metadata below.

General

- App Information
- Pricing and Availability
- App Privacy
- Ratings and Reviews
- Version History
- App Review

Features

- In-App Purchases
- Subscriptions
- App Store Promotions
- Custom Product Pages
- In-App Events
- Product Page Optimization

iPhone 6.7" Display iPhone 6.5" Display iPhone 5.5" Display iPad Pro (6th Gen) 12.9" Display iPad Pro (2nd Gen) 12.9" Display

Drag up to 3 app previews and 10 screenshots here.
We'll use these for all iPhone display sizes and localizations you select.

0 of 3 App Previews | 0 of 10 Screenshots | Choose File | Delete All

Promotional Text ?

Description ?

170

18. Add Build

Add the Build that you archived and uploaded~

kingbit ▾ App Store Services TestFlight Xcode Cloud

iOS App iOS App 1.0 Save Add for Review

1.0 Prepare for Submission

Add macOS App Version Information English (Canada) ?

Add tvOS App

The product page for this app version will be published on the App Store with the assets and metadata below.

General

App Information

Pricing and Availability > iMessage App ?

App Privacy

Ratings and Reviews

Version History

App Review

Features

In-App Purchases

Build + Subscriptions

Upload your builds using one of several tools. See Upload Tools

Add Build

App Store Promotions

Custom Product Pages

In-App Events

Product Page Optimization

Game Center

App Review Information

Sign-In Information ?

Provide a user name and password so we can sign in to your app. We'll need this to complete your app review.

Contact Information ?

First name Last name

19. Submit for Review

If you've filled everything out you'll be able to "Add for Review" (Good luck!)

Apps Analytics Trends Reports Users and Access Agreements Max Humber ▾
Bracket Ltd.

[App Store](#) [Services](#) [TestFlight](#) [Xcode Cloud](#)

iOS App 1.0

[Save](#) [Add for Review](#)

Version Information English (Canada) ▾ ?

The product page for this app version will be published on the App Store with the assets and metadata below.

iOS Previews and Screenshots ?

Adding screenshots for the newest devices can help you accurately represent your app's user experience on the App Store. Keep in mind that we'll use these screenshots for all iOS device sizes and localizations. Screenshots are only required for iOS apps.

Q&A



Fin.

@maxumber
/in/maxumber