

How to run iRecycle

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Requirements

- MacBook Pro, MacBook Air or iMac running macOS version 10.14 upwards.
- Xcode version 11.3 upwards installed.
- Physical iPhone X, Xs or 11 pro (5.8-inch iPhone needed) device with iOS 13 upwards installed.
 - o Turn off Dark Mode from your iPhone to view all of the app's features and writings clearly.
- Use the Apple ID account and Google account, with the below criteria:
 - o Email: queenMary8098@gmail.com
 - o Password: QueenMary2020

How to run iRecycle

The first thing to do is unzip the iRecycle zip file. Here all the project's source code files (.swift), user interface files (.storyboard) and images (.xcassets) used/created will be found (inside the sub-folder also called *iRecycle*). The executable file (.xcworkspace) of the application (final year project) will also be found within the zip file. Within the folder the *iRecycle.xcworkspace* file will have to be opened for the app to be run. The app can then be simulated in two different ways, either using a physical iPhone X, Xs or 11 pro device (**the one to use**) or using Xcode's inbuilt simulator.

iRecycle simulation on a physical device

The following steps must be followed:

- 1) Open the *iRecycle.xcworkspace* file, from the iRecycle folder.
- 2) If in the Xcode project navigator the *Queen Mary* team (follow figure 1 then figure 2) is not present, follow these substeps, otherwise, skip them.
 - a. Once Xcode is opened a development team needs to be added.
 - b. Follow the steps in figure 1.
 - c. In the team section (step 3 of figure 1) select *Add an Account* and when prompted insert the Apple ID account with the credentials listed in the **Requirements** section (above).
 - d. Once the Apple ID account has been added, add the *Queen Mary (Personal Team)* as a team from the displayed list (step 3 of figure 1).
 - e. Once that is done you should have something like figure 2.
- 3) Connect via cable, your physical iPhone X, Xs or 11 pro device to your MacBook/iMac.
- 4) Select your connected personal device from Xcode (figure 3).
- 5) Once your device is selected press the play button on Xcode (top left of figure 3) or CMD+R to download the app on your device.
- 6) During the installation, Xcode may generate an alert asking to input your MacBook's/iMac's password (figure 4). Do this and then select *Always Allow* to not have you asked again.
- 7) Once the installation (building) is completed Xcode will show the alert like figure 5. You will have to trust the *Queen Mary* developer team before using the app on your device (trying to open the app on your device will show an alert like figure 6). To do so follow these substeps:
 - a. Go to your device's *Settings > General > Profiles & Device Management*.
 - b. Select *Apple Development: queenmary...*
 - c. Click the *Trust "Apple Development: queenmary..."*

- d. Press *Trust* again.
- 8) Press the play button (or CMD+R) on Xcode to install the app again (to make sure everything works).
- 9) Once the installation has finished iRecycle can be run from your device (disconnect or keep your device connected to your machine, does not matter).

NOTE: iRecycle will be accessible on your device for only 7 days. Afterwards, you will have to repeat the above steps 3 to 8.

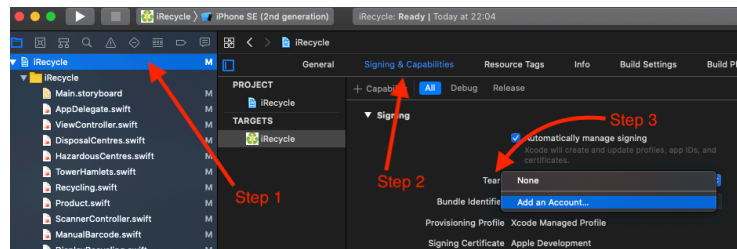


Figure 1. Adding the Queen Mary team to the project (part 1).

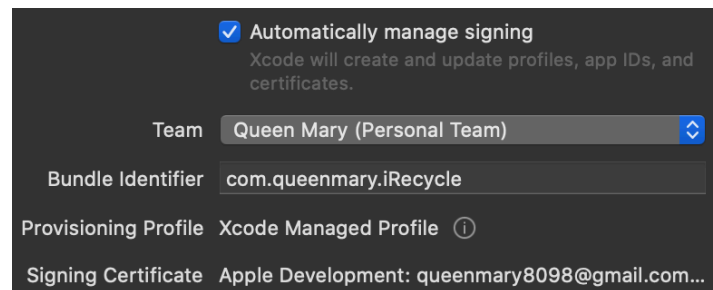


Figure 2. Adding the Queen Mary team to the project (part 2).

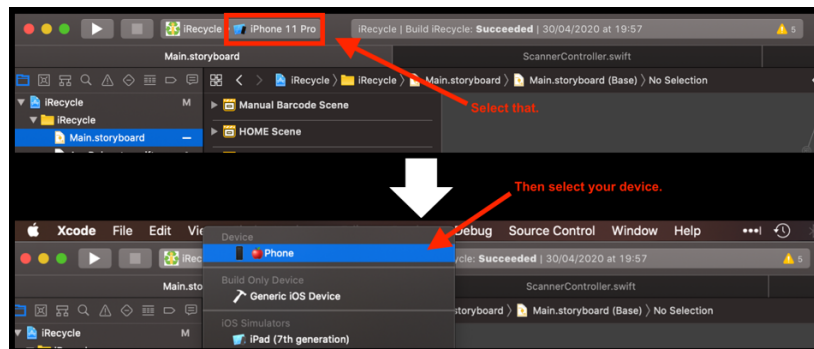


Figure 3. Selecting your physical device.

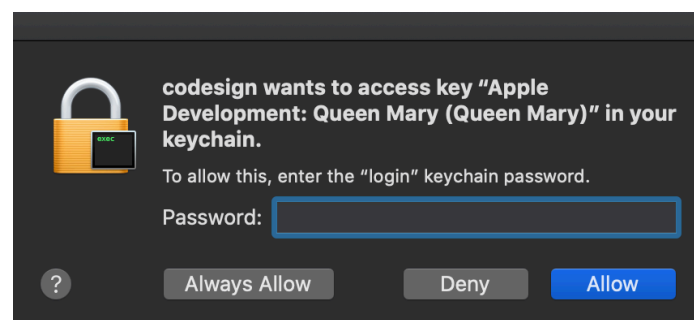


Figure 4. Enter your machine's password during Xcode build.

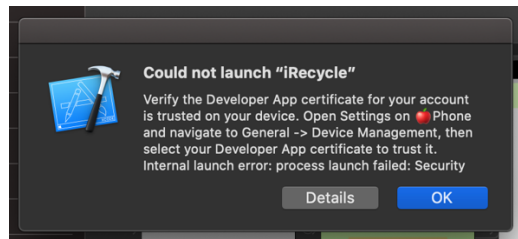


Figure 5. Xcode alert from step 7.

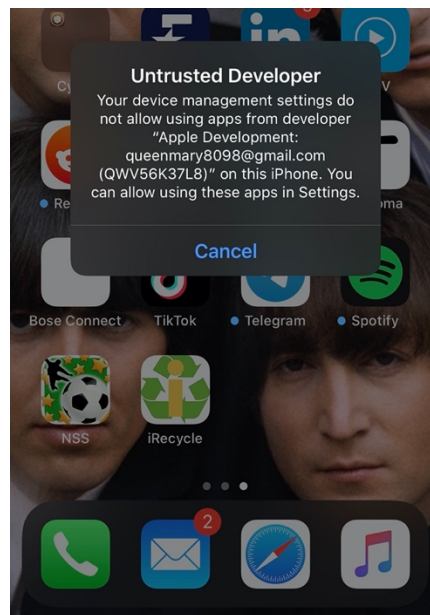


Figure 6. Grant developer access on your iPhone.

iRecycle simulation on Xcode simulator

The following steps must be followed.

- 1) Open the *iRecycle.xcworkspace* file, from the iRecycle folder.
- 2) Choose your iPhone X, Xs or 11 pro simulator device from Xcode (from figure 3 select iPhone X, Xs or 11 pro, whichever available).
- 3) Once your simulation device is selected press the play button on Xcode (top left of figure 3) or CMD+R to simulate the app.
- 4) A simulator will be opened where you can interact with iRecycle (upon download completed).

NOTE: in this type of simulation the barcode scanner feature cannot be accessed as Xcode's simulator will not have a physical camera.

Issues

If during the simulation of iRecycle, on a physical device or Xcode's simulator, something goes wrong preventing from simulating iRecycle, the following steps can be taken.

- 1) From the iRecycle main folder, permanently delete the following files: *iRecycle.xcworkspace*, *Podfile*, *Podfile.lock* and the folder *Pods*.
- 2) Install CocoaPods on your machine via these substeps, if not already installed, otherwise skip them and continue to step 3.
 - a. Open terminal from your machine.
 - b. Type and enter the `sudo gem install cocoapods` command.
 - c. Enter your machine's password.
 - d. CocoaPods are now installed.
- 3) From terminal access the directory where iRecycle is saved (i.e. the desktop as by figure 7), following the steps in the red box from figure 8.
- 4) Once the directory is accessed, type and enter in the terminal the `pod init` command (red box from figure 8).
- 5) From your iRecycle folder, open the created *Podfile* (figure 9) in a text editor.
- 6) Enter in the *Podfile* the lines `pod 'RealmSwift'` under the `# Pods for iRecycle` line (figure 9).
- 7) Save and close the *Podfile*.
- 8) Go back to the terminal and enter the `pod install` command (white box from figure 8).
- 9) The *iRecycle.xcworkspace* file will be created again in the iRecycle folder.
- 10) Follow the steps to simulate the app on the device again.

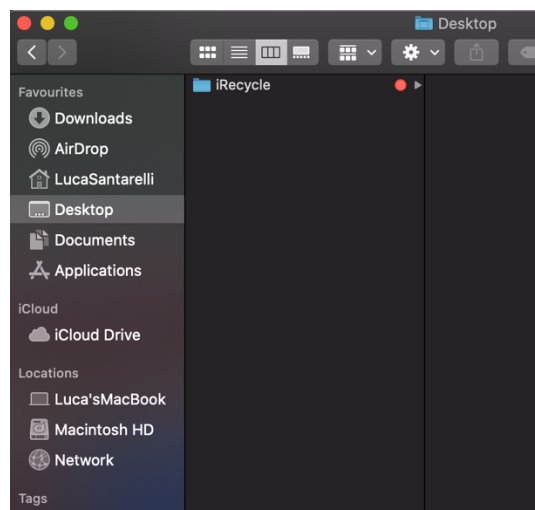


Figure 7. iRecycle saved on the desktop.

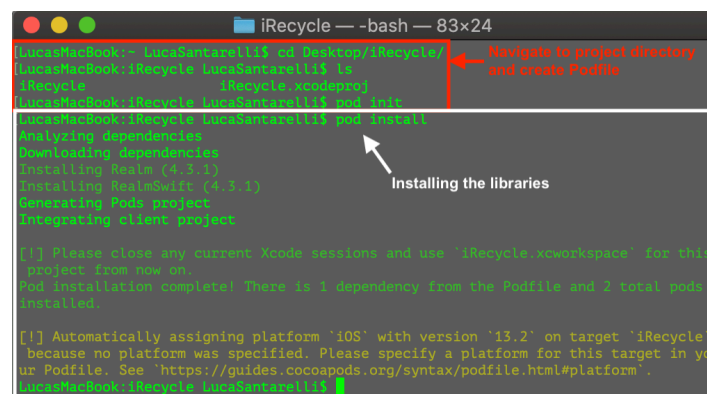


Figure 8. Installing CocoaPods

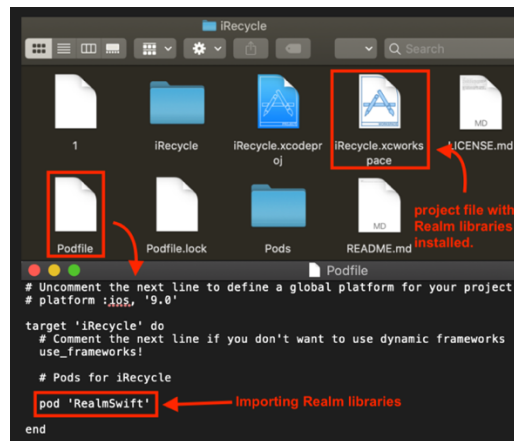


Figure 9. Podfile and iRecycle.xcworkspace.