

CODAPPS

Testing and releasing your app for iPhones

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1. Preliminary setup



1. Before doing this lesson you must have completed the first lesson of this module, because it includes essential steps.
2. **You need a Mac computer**

As explained in the first lesson of this module, here are your options:

- a. paying 99\$ (per year) to access Apple's Developer program.
 - this allows you to test your app on your own phone
 - you can release your app on the App Store **if Apple judges that your app is "good enough"**
- b. access an [iOS Developer University Program](#)
 - this allows you to test your app on your own phone **for free**
 - you cannot release your app on the App Store (unless you pay the 99\$ of course)

Codename One provides straightforward help and tutorials for case a. Have a look:

► <https://www.youtube.com/watch?v=pOLOoZFHxwU> (*YouTube video*)

Or visit [the corresponding web page](#).

In this lesson, we focus on case b.

[Emlyon business school](#) students have access to the iOS Developer University Program and we will see here how to use it.

If you are in a different school, ask your administration how they could set up such a program! (it is free).

Make sure you have an hour ahead of you, some tea or coffee and plenty of patience. This is going to be a long road.



Figure 1. Releasing your app for iOS

2. The long road



The app, once published on the the Apple App Store, will be public. Make sure your app does not include personal content (pictures, personal details...) that you do not want to get public!

a. Getting access to the Apple Developer Console

You have received an email inviting you to join an Apple Developer program : If you don't find this email, check your spam folder !

☐ Apple Developer ▶ You have been invited to join an Apple Developer Program

Figure 2. Email invitation

Open this email, click on the link :

You have been invited to join an Apple Developer Program

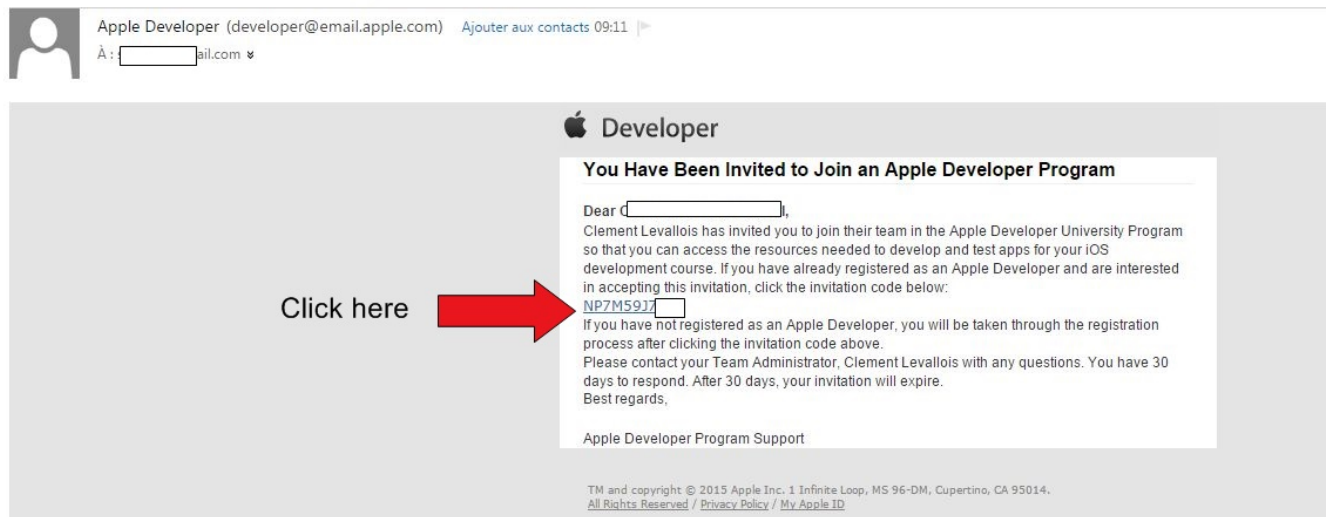


Figure 3. Content of the email

On the page that opens, choose "I need to register as an Apple Developer"

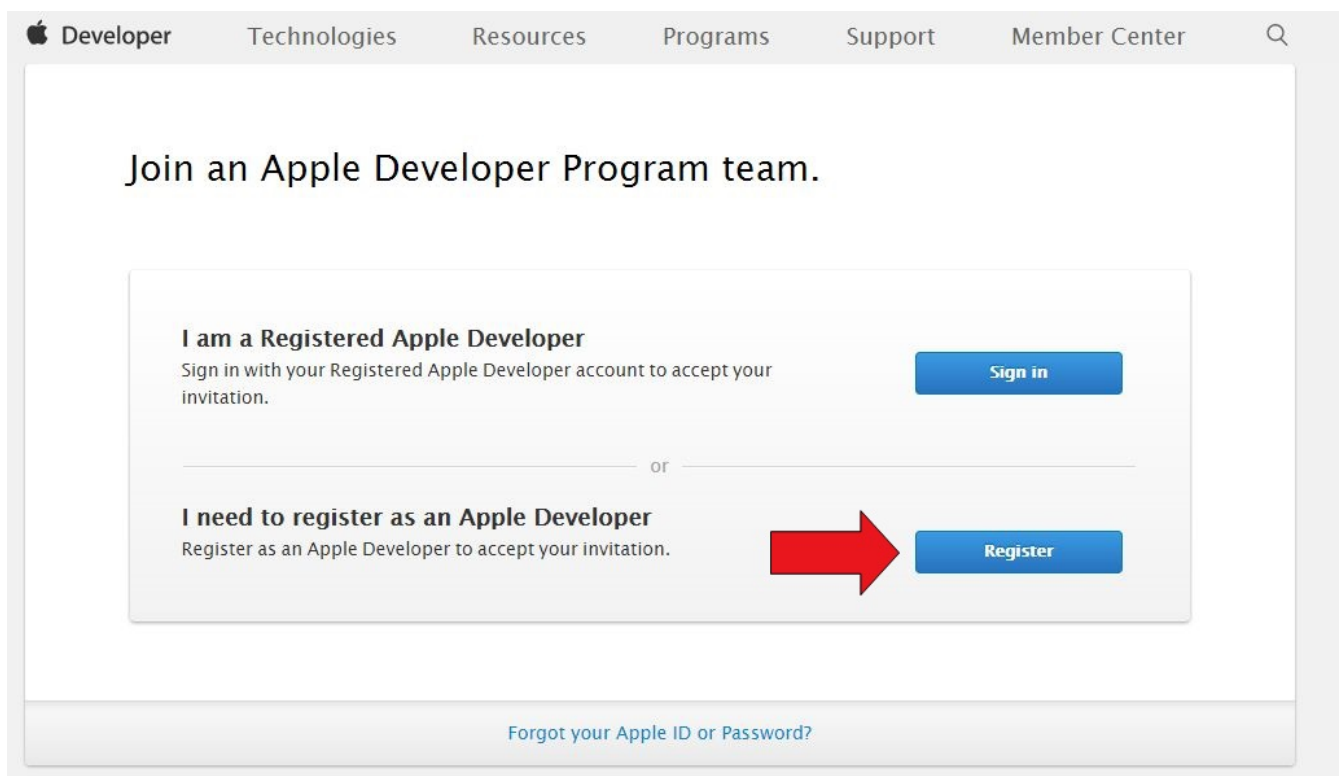
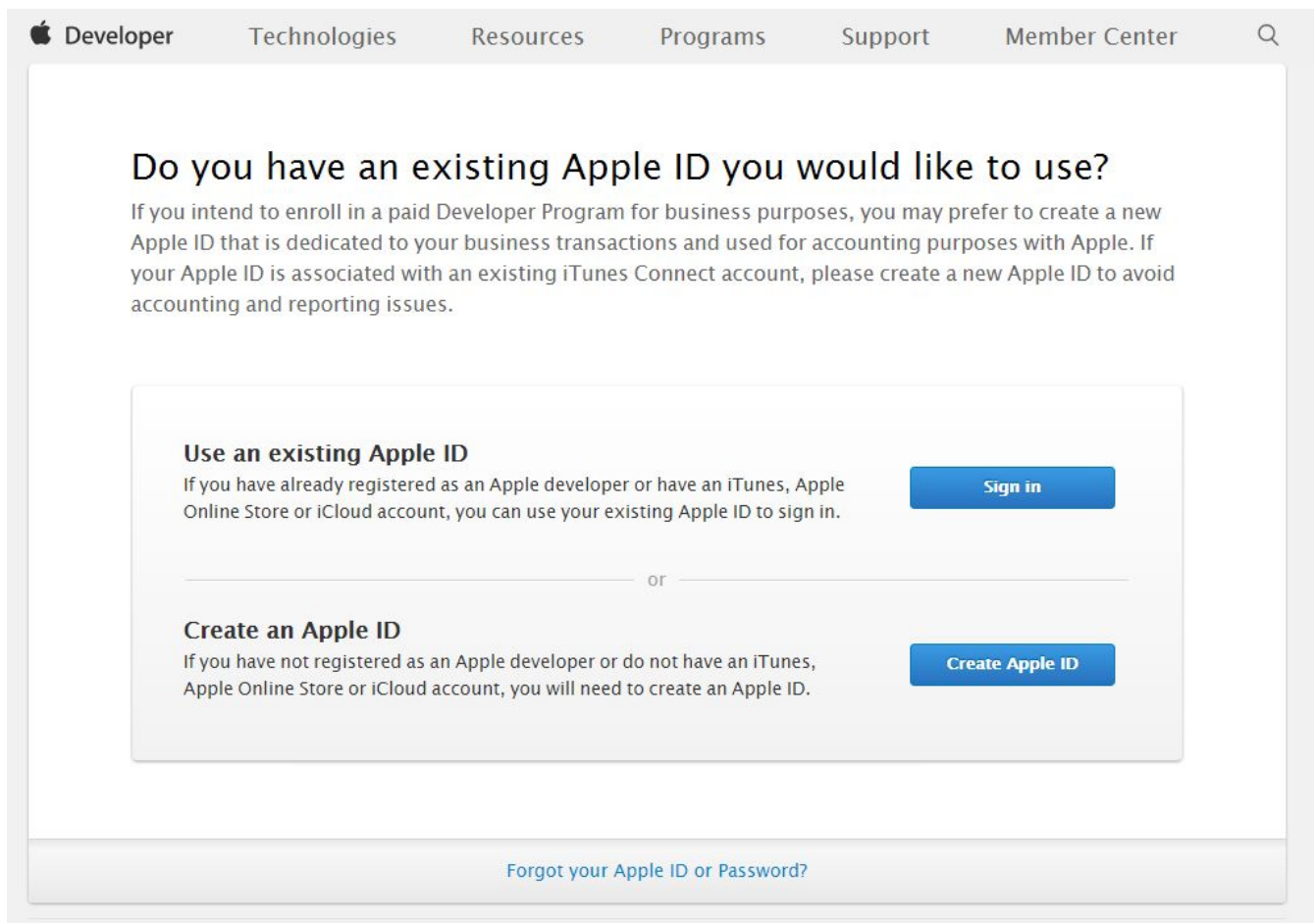


Figure 4. Registration as an Apple Developer

Then you arrive on a screen that asks you to use your Apple id:

- If you have an Apple Id (because you own a Mac, or an iPhone, or because you use iTunes...), choose "sign in"

b. If you don't have an Apple id, choose "Create an Apple Id"



The screenshot shows the Apple Developer website's account creation page. At the top is a navigation bar with links: Developer, Technologies, Resources, Programs, Support, and Member Center, followed by a search icon. The main heading is "Do you have an existing Apple ID you would like to use?". Below this is a paragraph explaining that for business purposes, a dedicated Apple ID is recommended, and if an existing iTunes Connect account is linked, a new Apple ID should be created to avoid accounting issues. The page offers two options: "Use an existing Apple ID" with a "Sign in" button, and "Create an Apple ID" with a "Create Apple ID" button. A link for "Forgot your Apple ID or Password?" is at the bottom.

Do you have an existing Apple ID you would like to use?

If you intend to enroll in a paid Developer Program for business purposes, you may prefer to create a new Apple ID that is dedicated to your business transactions and used for accounting purposes with Apple. If your Apple ID is associated with an existing iTunes Connect account, please create a new Apple ID to avoid accounting and reporting issues.

Use an existing Apple ID

If you have already registered as an Apple developer or have an iTunes, Apple Online Store or iCloud account, you can use your existing Apple ID to sign in.

Create an Apple ID

If you have not registered as an Apple developer or do not have an iTunes, Apple Online Store or iCloud account, you will need to create an Apple ID.

[Forgot your Apple ID or Password?](#)

Figure 5. Apple id

Then you need to agree on the license:

DeveloperTechnologiesResourcesProgramsSupportMember Center

Apple Developer AgreementClement Levallois | Sign Out

This is a legal agreement between you and Apple.

Download PDF

THIS IS A LEGAL AGREEMENT BETWEEN YOU AND APPLE INC. ("APPLE") STATING THE TERMS THAT GOVERN YOUR PARTICIPATION AS AN APPLE DEVELOPER. PLEASE READ THIS APPLE DEVELOPER AGREEMENT ("AGREEMENT") BEFORE PRESSING THE "AGREE" BUTTON AND CHECKING THE BOX AT THE BOTTOM OF THIS PAGE. BY PRESSING "AGREE," YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, PRESS "CANCEL".

Apple Developer Agreement

1. Relationship With Apple; Apple ID and Password. You understand and agree that by registering with Apple to become an Apple Developer ("Apple Developer"), no legal partnership or agency relationship is created between you and Apple. You agree not to represent otherwise. You also certify that you are at least thirteen years of age and you represent that you are legally permitted to register as an Apple Developer. This Agreement is void where prohibited by law and the right to register as an Apple Developer is not granted in such jurisdictions. Unless otherwise agreed or permitted by Apple in writing, you cannot share or transfer any benefits you receive from Apple in connection with being an Apple Developer. The Apple ID and password you use to log into your Apple Developer account cannot be shared in any way or with anyone. You

☐ By checking this box I confirm that I have read and agree to be bound by the Apple Developer Agreement.

☐ I'd like to receive marketing emails to stay up-to-date with Apple Developer news.

CancelSubmit

Figure 6. Apple Developer Agreement

You should be redirected to this page, which is the place where you manage the certificates of your apps for iPhones.

Congratulations, that's already a big step!

b. Generating a certificate request

Click on 'Certificates, Identities and Profiles'

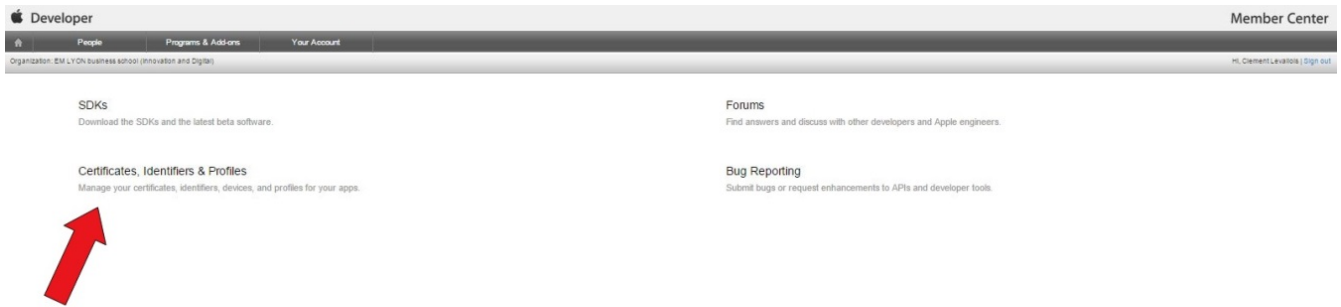


Figure 7. Access certificates

Click on **Certificates** → **All** then click on the **+** sign, to add a new certificate for your app :

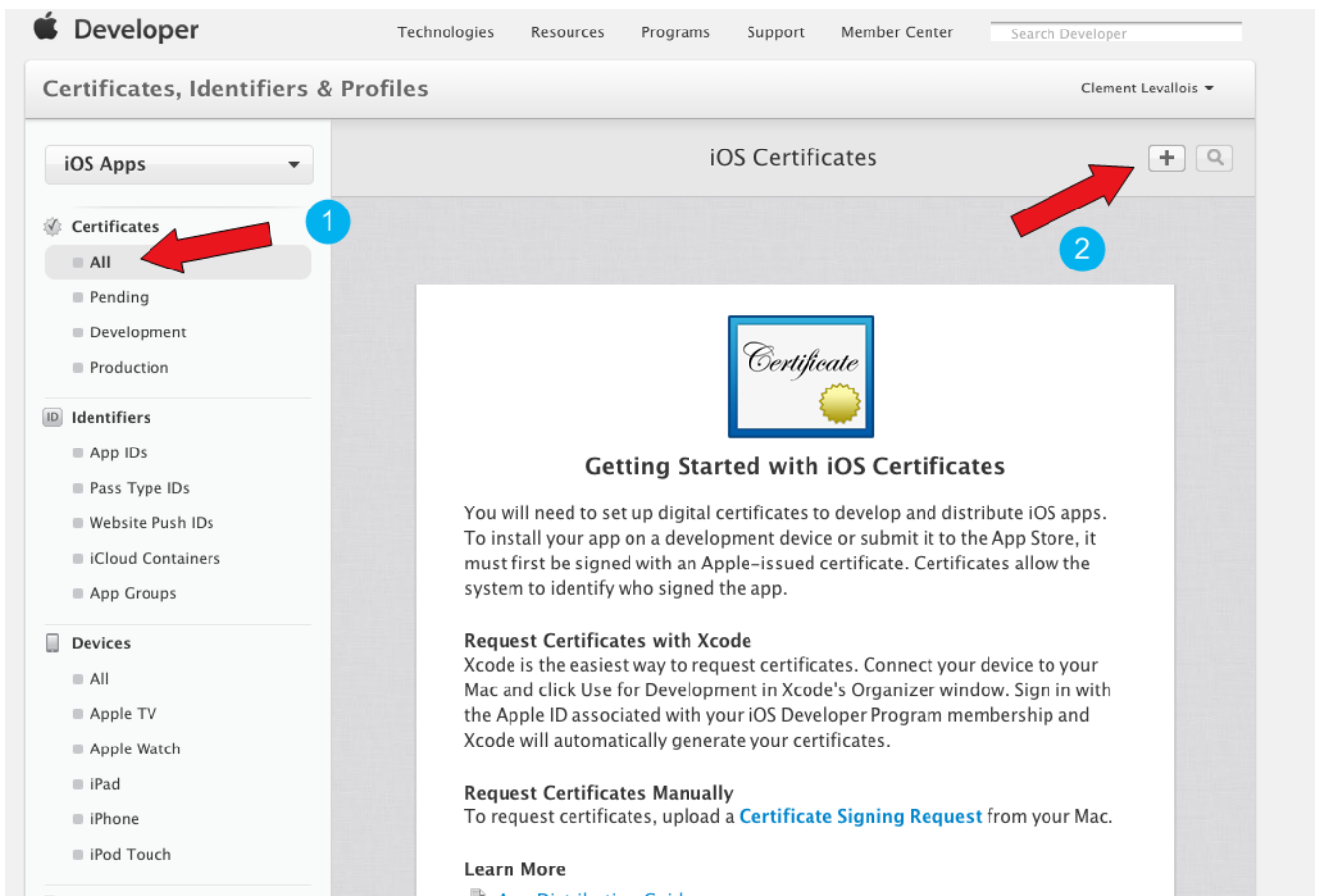


Figure 8. Adding a certificate

1. Choose "iOS App Development",
2. click on "Worldwide Developer Relations Certificate Authority"
 - it will download a file on you computer.

3. Then click on "Continue"

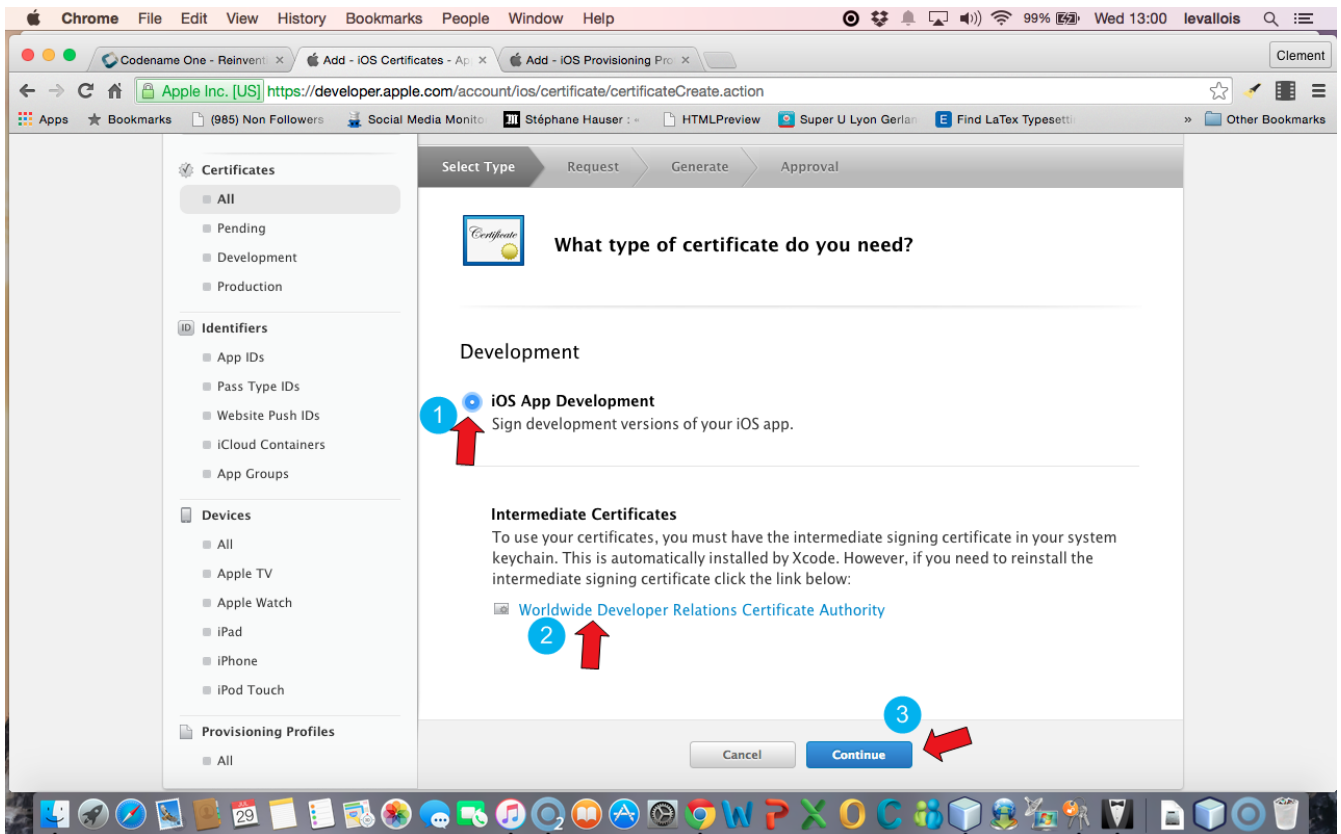


Figure 9. step 1 of the creation

You should arrive on this screen, **stay on it**:

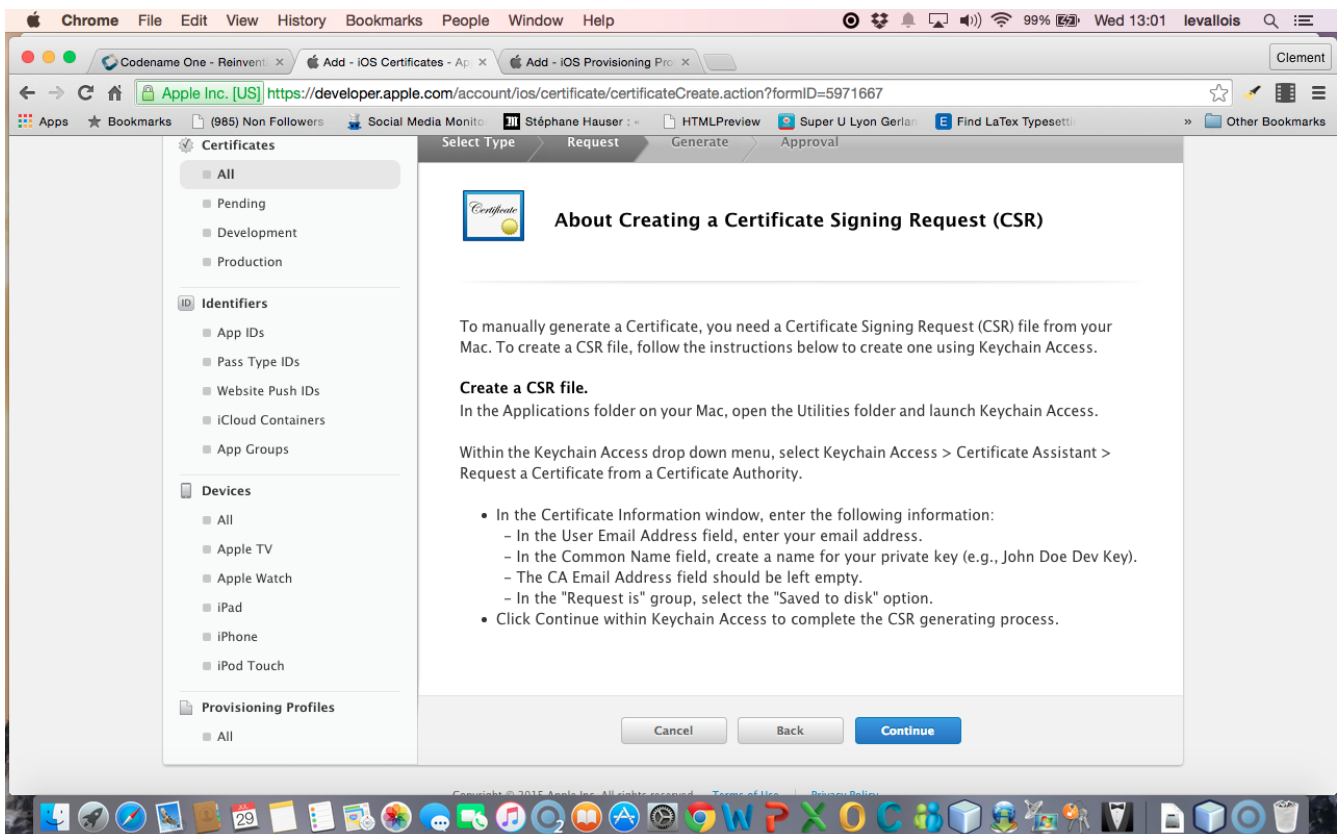



Figure 10. step 2 of the creation

In the Finder on your Mac, open the Applications folder (), and inside it, open the "Utilities" folder:

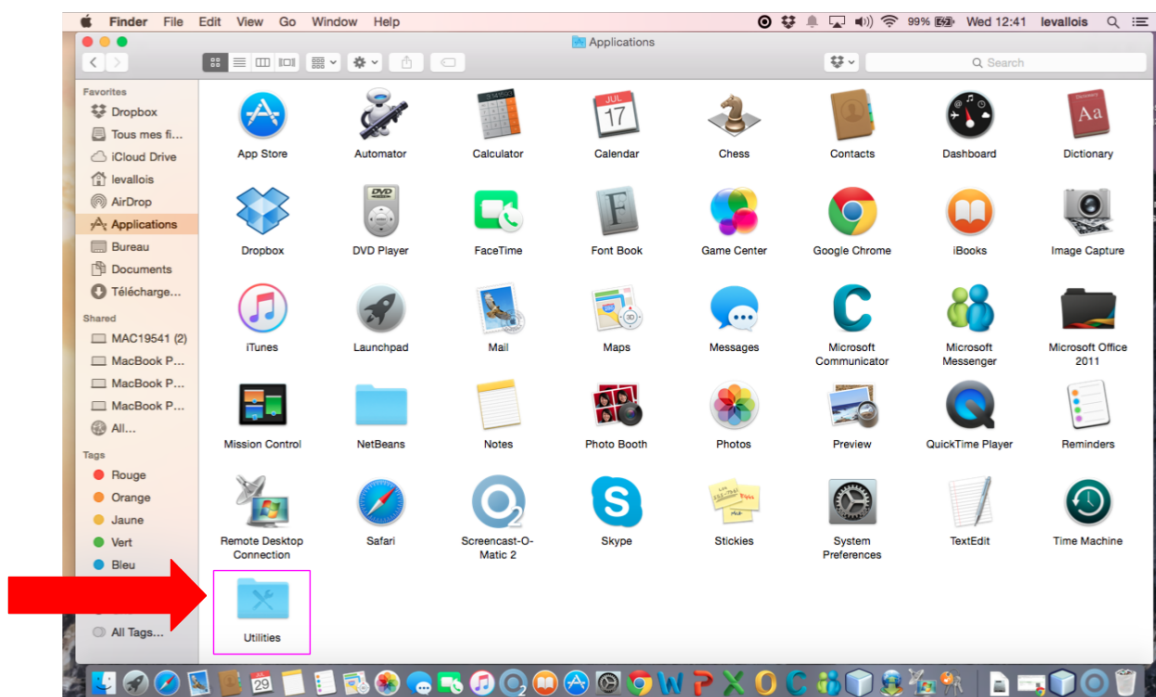


Figure 11. Opening the Utilities Folder

In the "Utilities" folder, open the Keychain access:

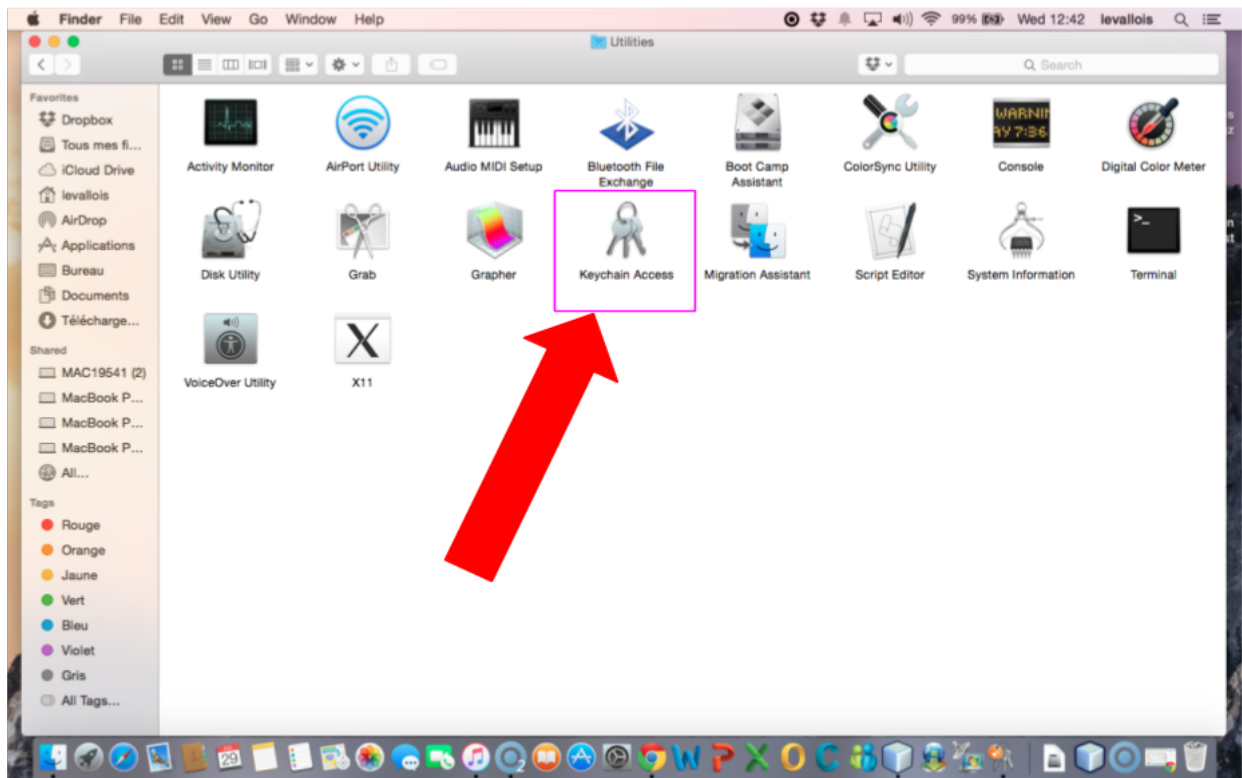


Figure 12. Opening the Keychain access

In the window that opens, select in the menu "Keychain access → Certificate Assistant → Request a Certificate from a Certificate Authority":

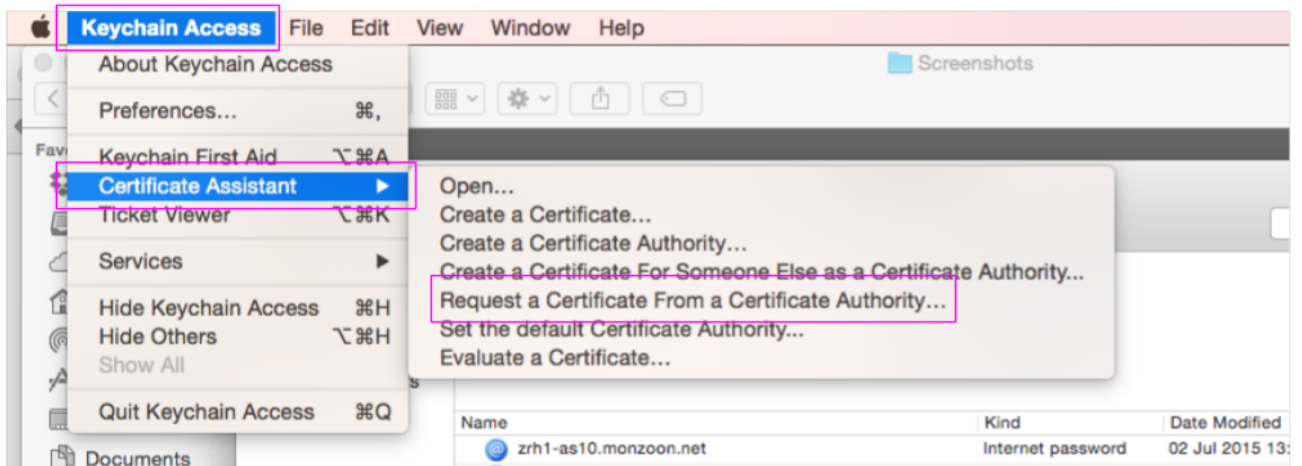


Figure 13. Requesting a certificate

In the small window that opens:

- In the field "User email address", put the email address **of your Apple ID**
- In the field "Common Name", put your **emlyon email address**
- Then choose "save to disk" and click on "continue".

I suggest you create a folder somewhere on your computer called "Apple certificates", where you will save the file.

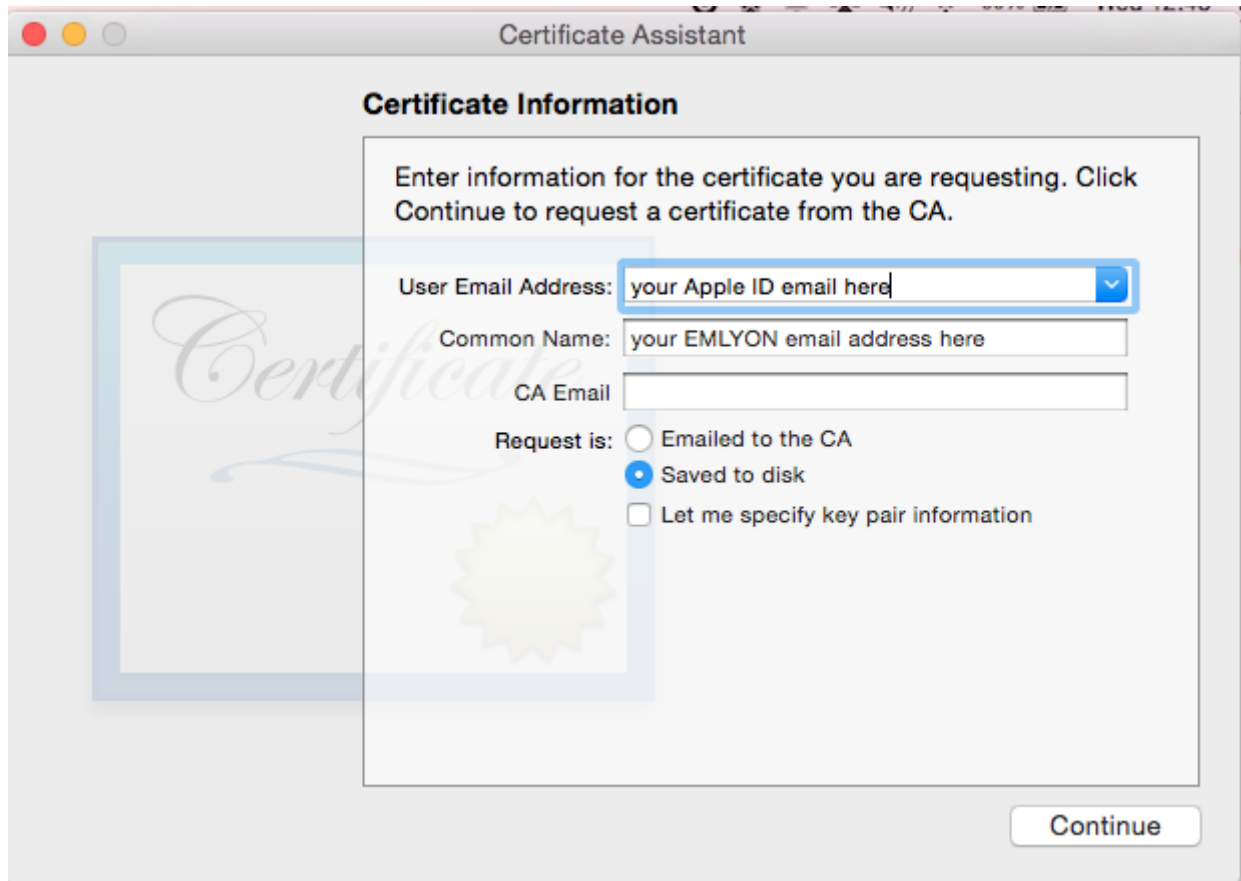
The image shows a macOS window titled "Certificate Assistant". Inside, there's a section titled "Certificate Information" with the instruction: "Enter information for the certificate you are requesting. Click Continue to request a certificate from the CA." The form contains the following fields and options: "User Email Address:" with a text box containing "your Apple ID email here" and a dropdown arrow; "Common Name:" with a text box containing "your EMLYON email address here"; "CA Email:" with an empty text box; and "Request is:" with three radio button options: "Emailed to the CA", "Saved to disk" (which is selected), and "Let me specify key pair information". A faint watermark of a certificate and a star is visible in the background. A "Continue" button is at the bottom right.

Figure 14. Filling in details

Now, let's go back to the website of the Apple Dev Center, where we can continue where we left !



If there is an error on the page, it just means that the page expired. Just reload it, and go back to the screen where we left

Upload the file "CertificateSigningRequest.certSigningRequest" that you just saved on your disk:

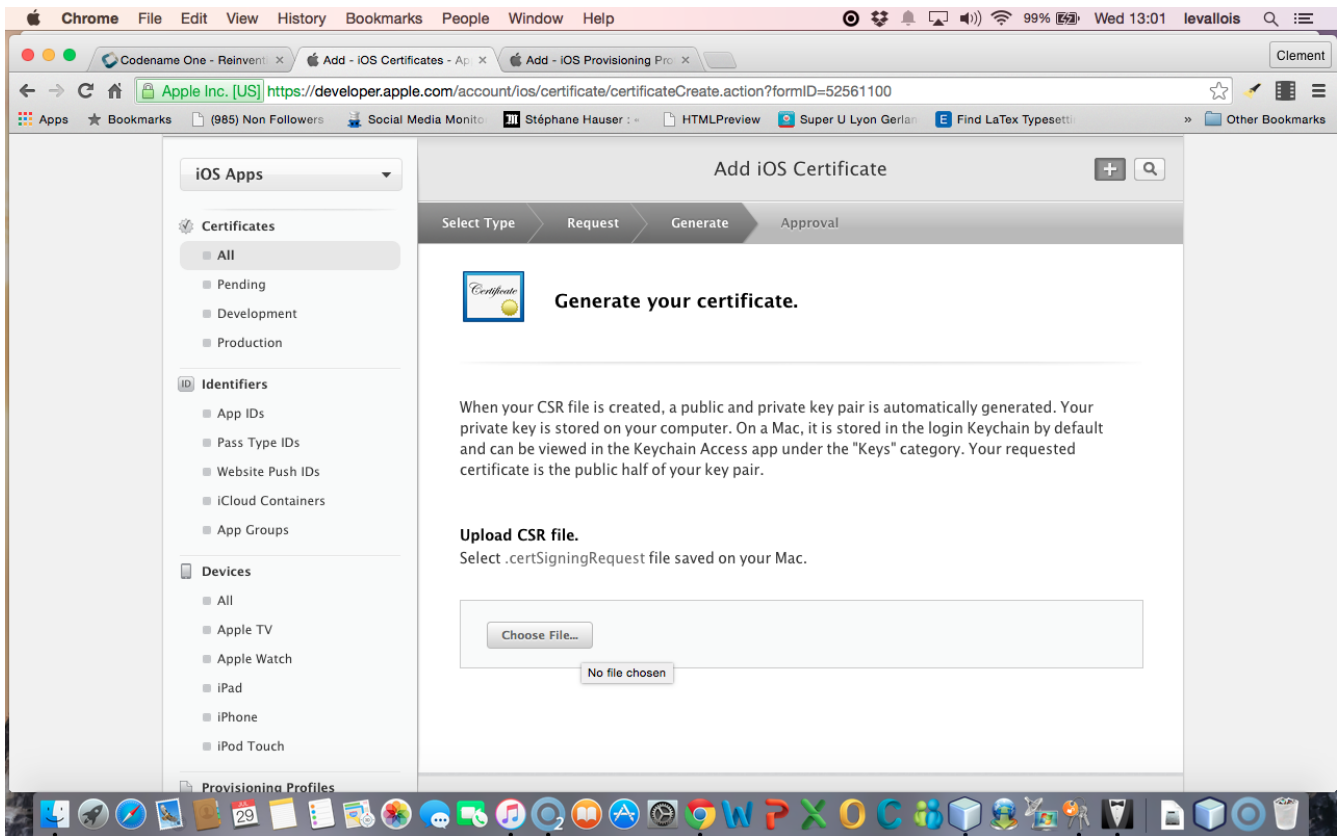


Figure 15. Uploading the certificate request

This upload is the step that creates your certificate. Congratulations! That's also a big step you just accomplished!

c. Using the certificate

Now download the certificate to your disk, in the same folder. It should be called "ios_development.cer":

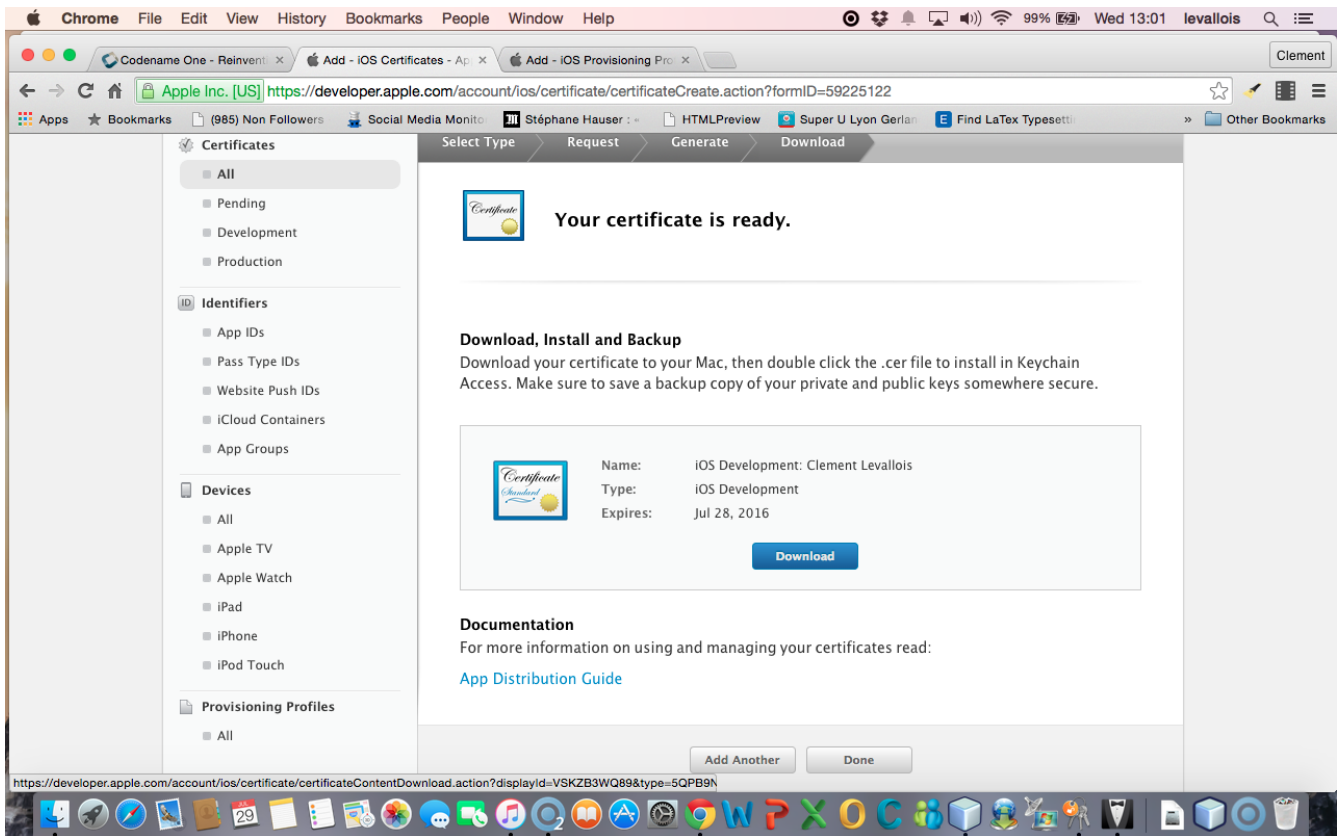


Figure 16. Downloading the certificate

Find your file "ios_development.cer" where you saved it. Double click on it. This will open the Keychain access:

- click on "Certificates" in the left menu
- Right click on the name of your certificate and choose "Export..."

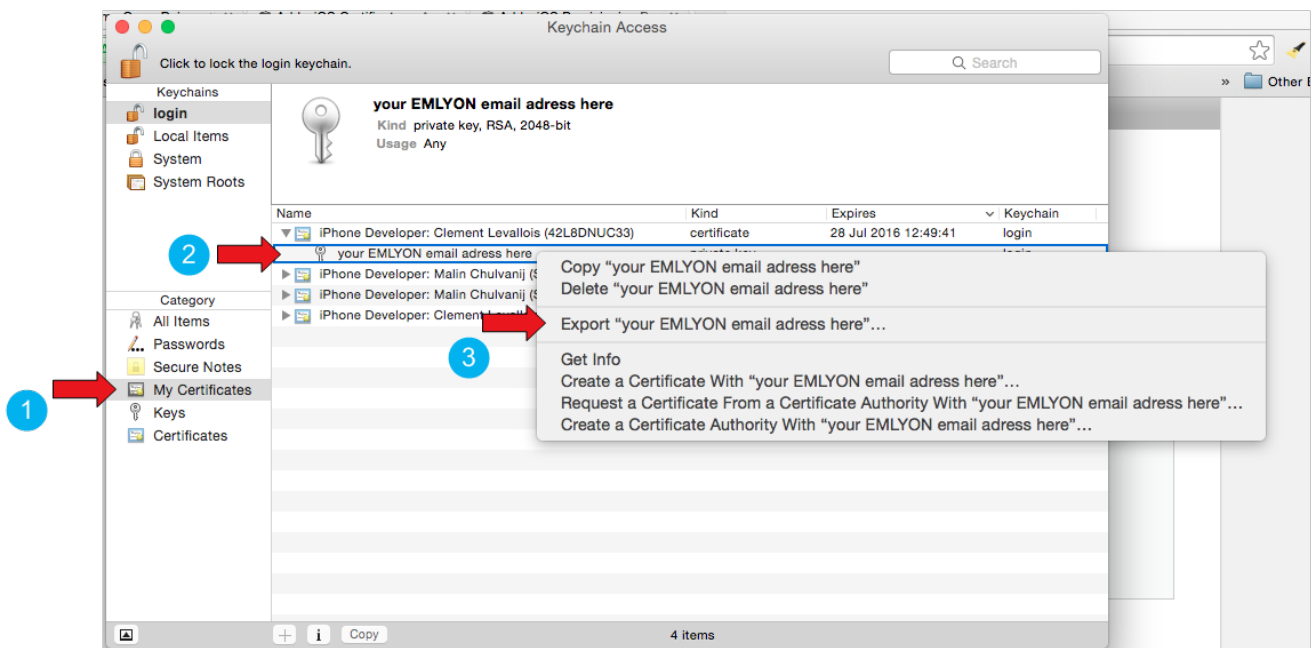


Figure 17. Exporting the certificate

This opens a window asking for a password. Put "emlyon1000":

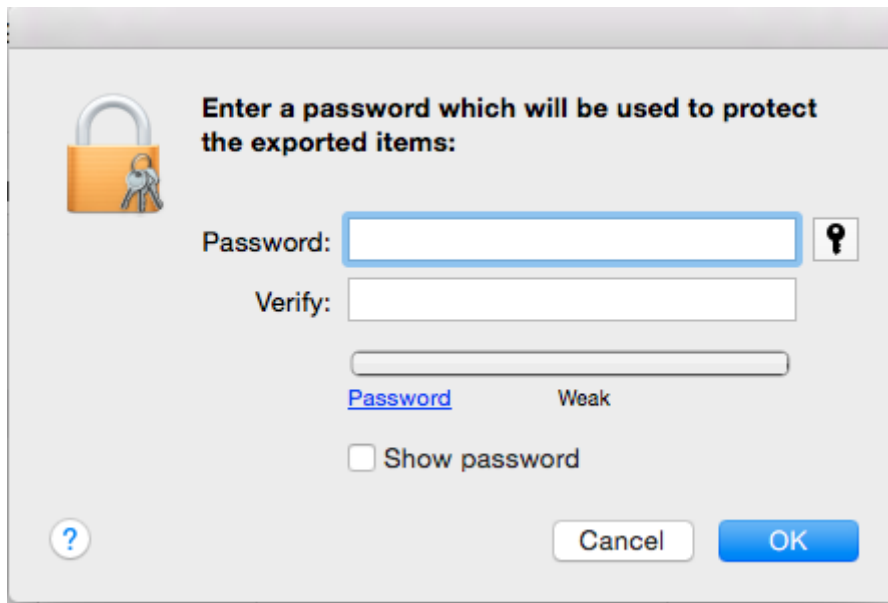


Figure 18. Assigning a password

Then on the next screen you are asked again for a password.

You should use the password of your Mac computer (the one you use to login when the computer starts) :

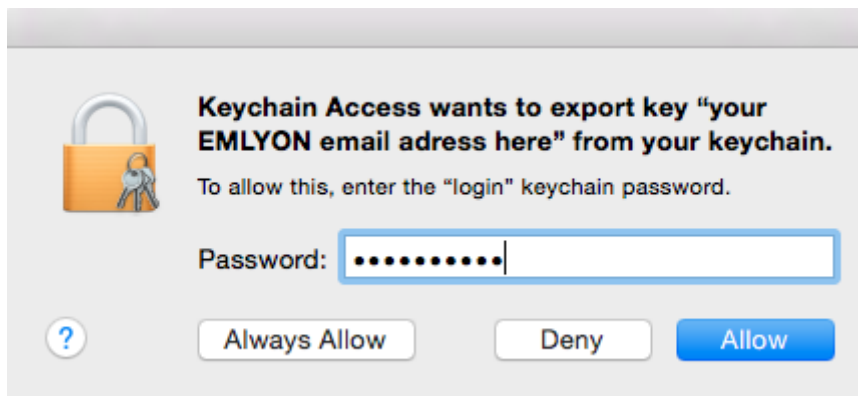


Figure 19. Confirming with the Mac password

You are invited to save a file on your disk. This is a file with "p12", save it in the same folder where you saved your other files for this certificate.

d. Getting the UDID of your phone

We need the UDID of your phone, the one where you will install and test your app.

The UDID is the unique identifier of your iPhone. You can find it by plugging your phone to iTunes. A very simple tutorial explains it here : <http://whatsmyudid.com/>

Once you have your UDID, write it to me here: <http://goo.gl/forms/mmotEWvRYs>

And now wait just a couple of days... I need to collect all UDID from students before I create "Provisioning Profiles" (yes, this process is long and horrible, but we are NEARLY there!).

I'll send you an email when you can resume this lesson, at the step just below: "Downloading a provisioning profile"

e. Downloading the Provisioning Profile

Go to "Provisioning Profiles" and download the most recent one:



I advise you to download it to the same folder where you saved the previous files created in this tutorial, related to certificates.

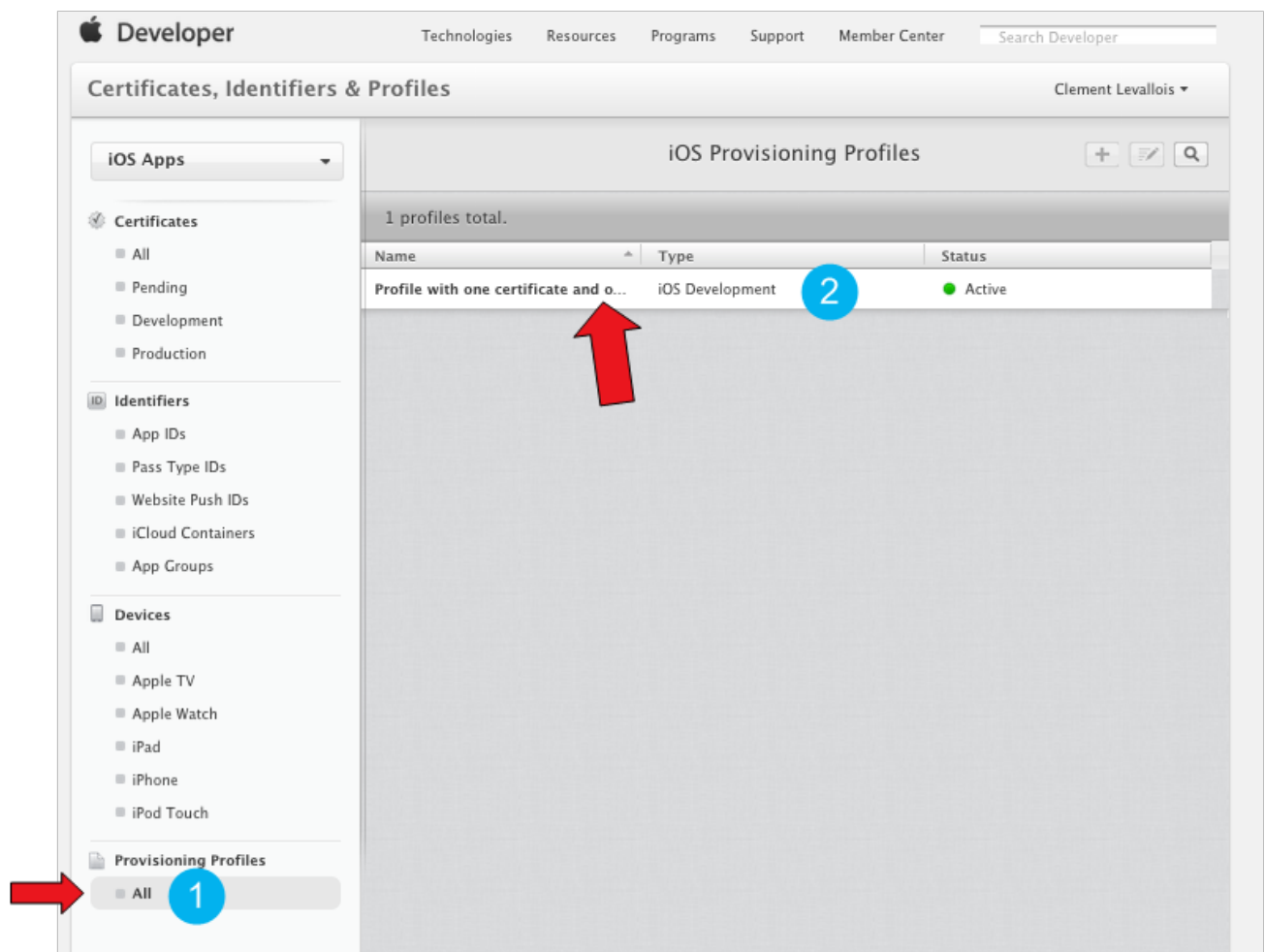


Figure 20. Downloading the most recent provisioning profile

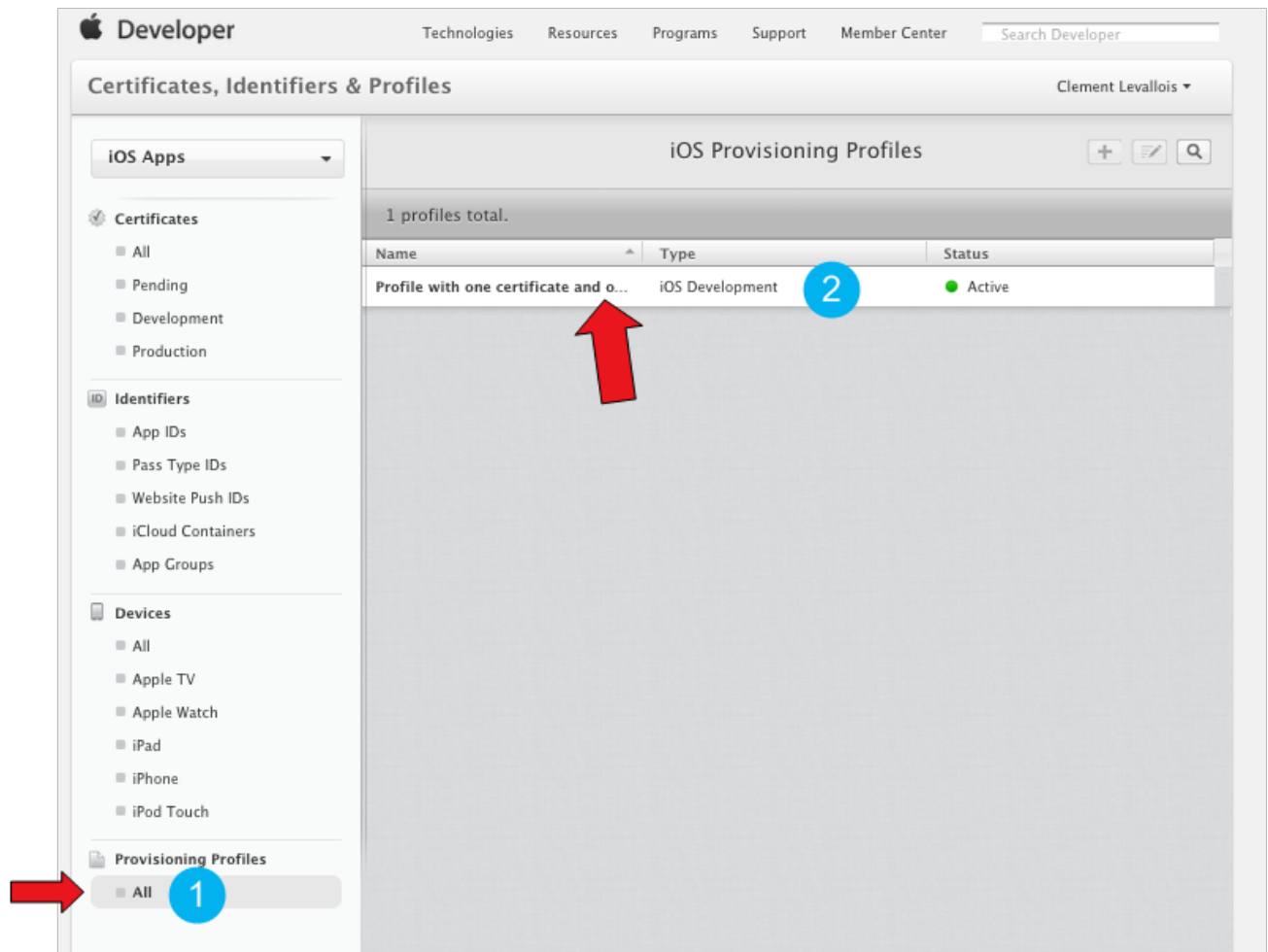


Figure 21. Downloading the most recent provisioning profile

Now, open NetBeans, right click on the name of your project, and select “Properties” (last item at the bottom).

Please check the screenshot below and the numbered steps, and read the indications for each of them:

1. Select “iOS” on the menu on the left
2. For Certificate, choose the file with the name ending in “p12” that you saved on your computer in this lesson
3. For Certificate password, write “emlyon1000”
4. For provisioning profile, choose the one we just downloaded
5. In app ID, you must add “4RVRDEN5JP.” Just before io.codapps
6. Validate

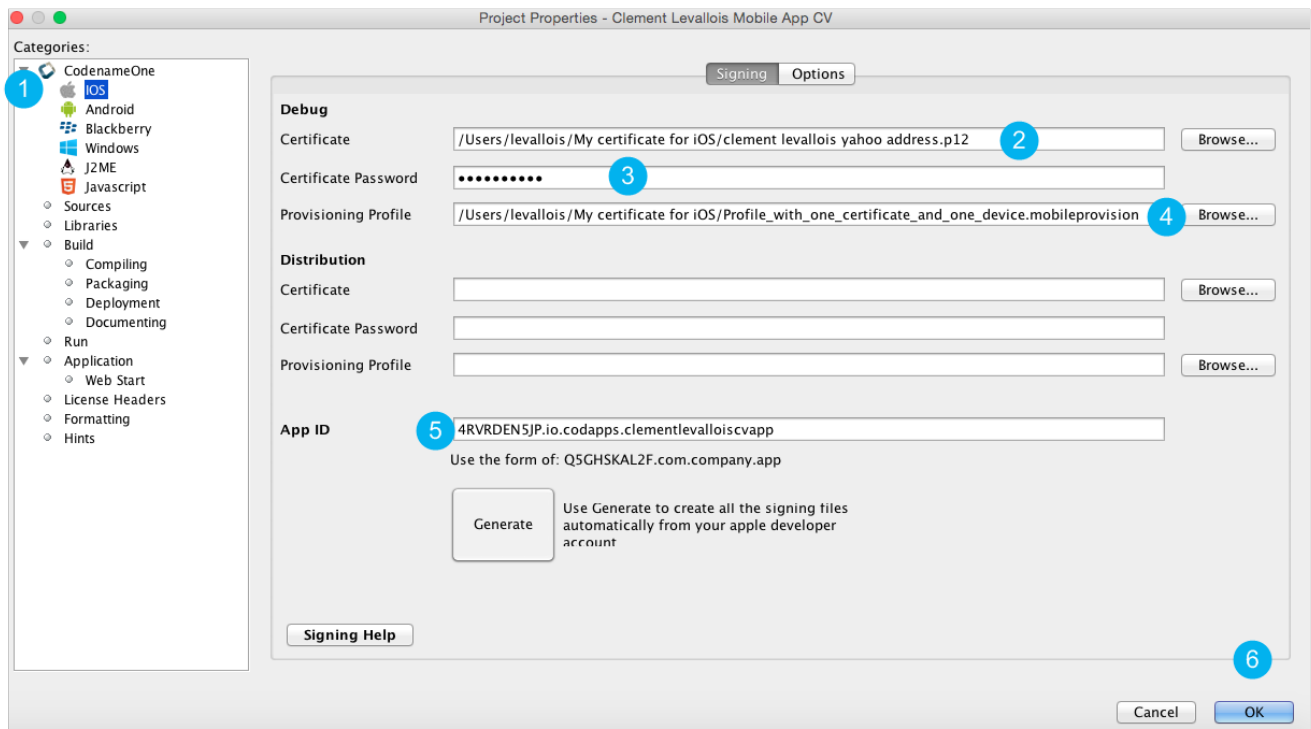


Figure 22. Filling in the properties in NetBeans

3. The end of the road: sending your build to Codename One

The version of your app that you will build to install on your iPhone is considered to be for the purpose of testing and debbuging.

For this reason, we will call it the "iOS debug build".

Launch the iOS debug build by right clicking on your project's name:

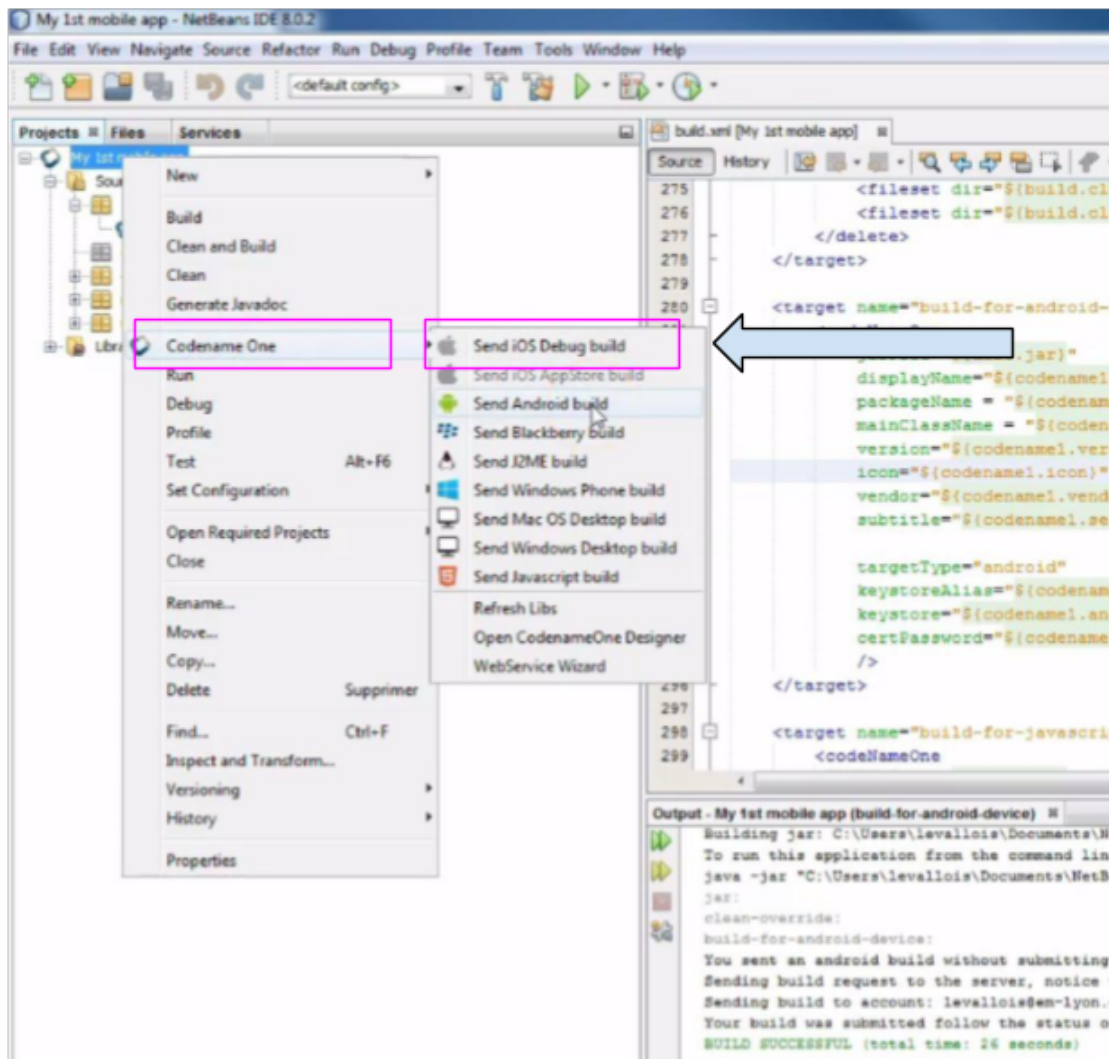


Figure 23. Sending the iOS Debug Build

If you get a "Build failed" message at the end, don't worry this is very common not to succeed at the first time.

Read the lesson in this module about possible causes and solutions.

If you get a successful build, continue here:

Now you should open your web browser, go to <http://www.codenameone.com> and login to your account.

Then go to the Dashboard:

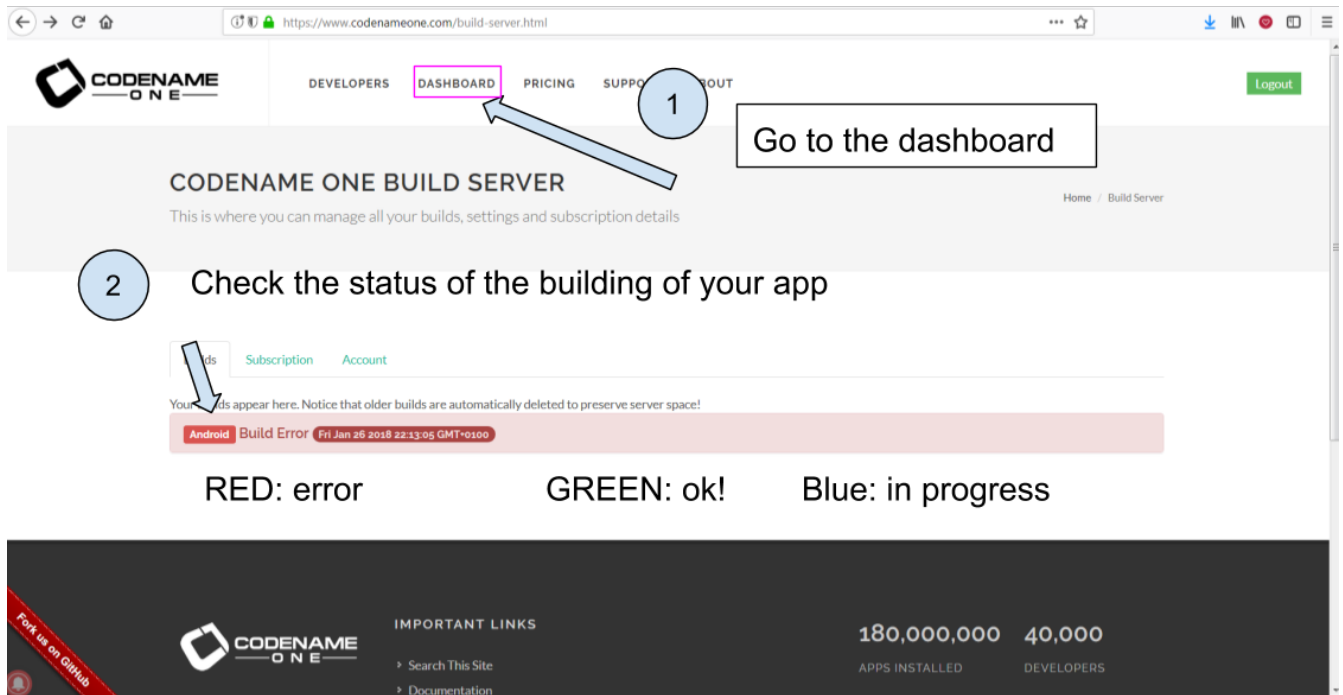


Figure 24. Checking the result on the website of Codename One

If the build is green and successful, you can go ahead and follow the next instructions below.

If it is red, again this is quite usual the first times. You can read the special lesson in this module to help you diagnostic and solve the error.

Ok, assuming your build was successful and "green", click on **the date and time** shown on it:

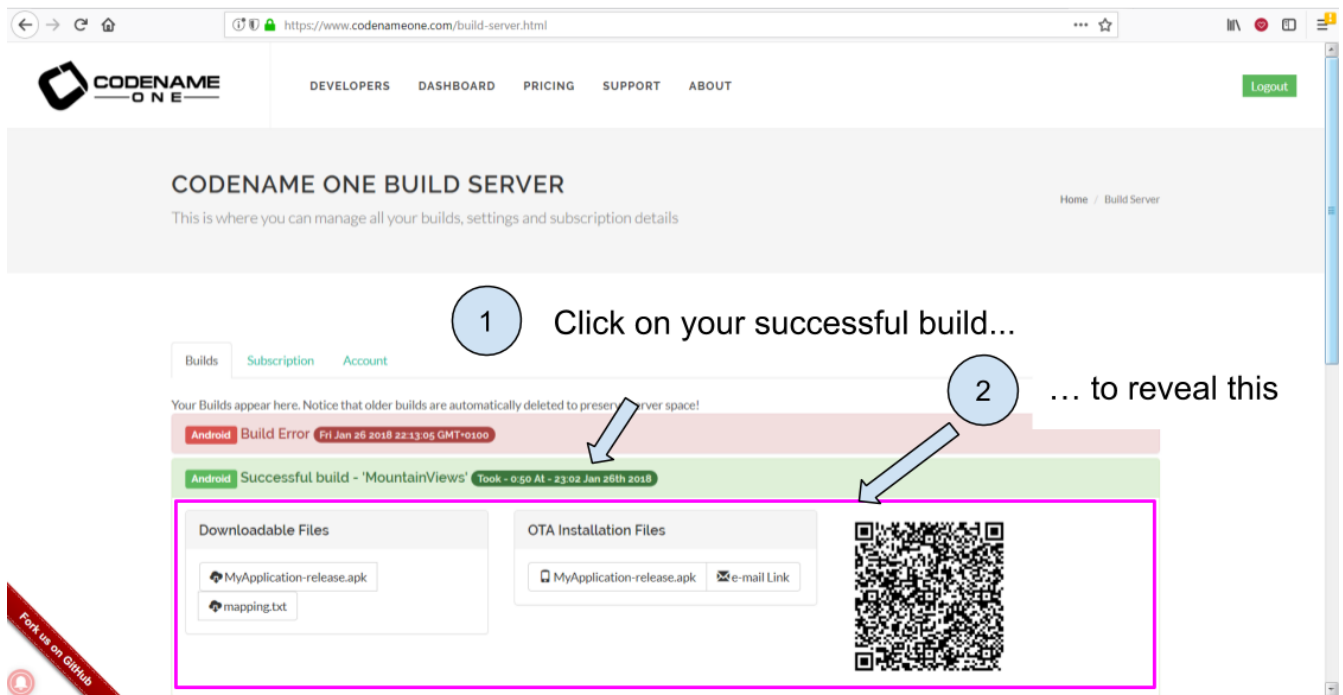


Figure 25. Revealing the QR code and the download options

And now, you can simply test your app on your iPhone.

Let's see how:

4. Installing the app on the iPhone

- Take your phone and open the QR code reader app that you installed on it.
- Flash the QR code displayed on your successful build on www.codenameone.com.
- Your app should install on your phone (follow the steps / confirm)
- go and find the icon of your app on your phone, open it and enjoy it!

The end

Questions? Want to open a discussion on this lesson? Visit the forum [here](#) (need a free Github account).

Find references for this lesson, and other lessons, [here](#).

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