

Module 4: Testing your app on a phone and distributing it

Level of difficulty: ● ● ● ○
Estimated time: 20 mn

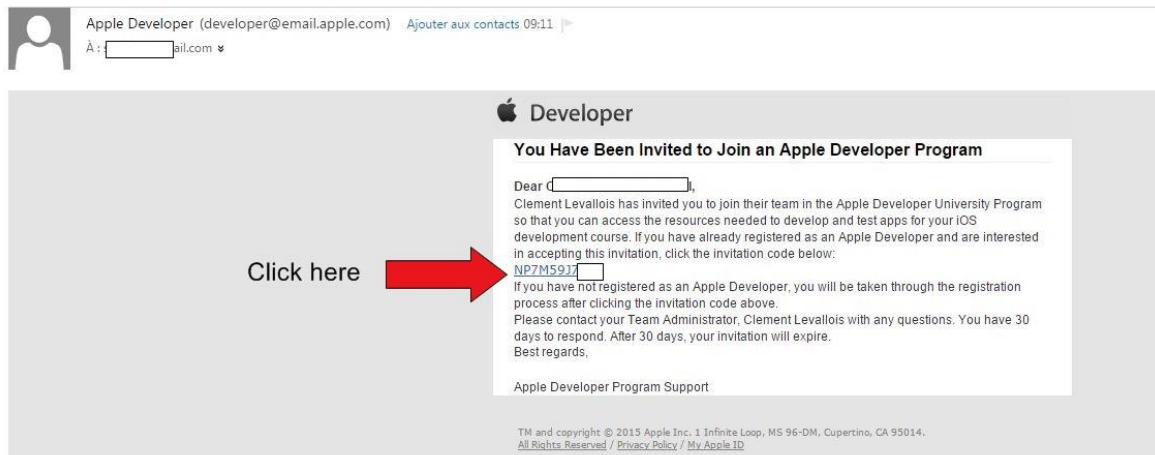
How to test your app on an iPhone - OPTION B

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

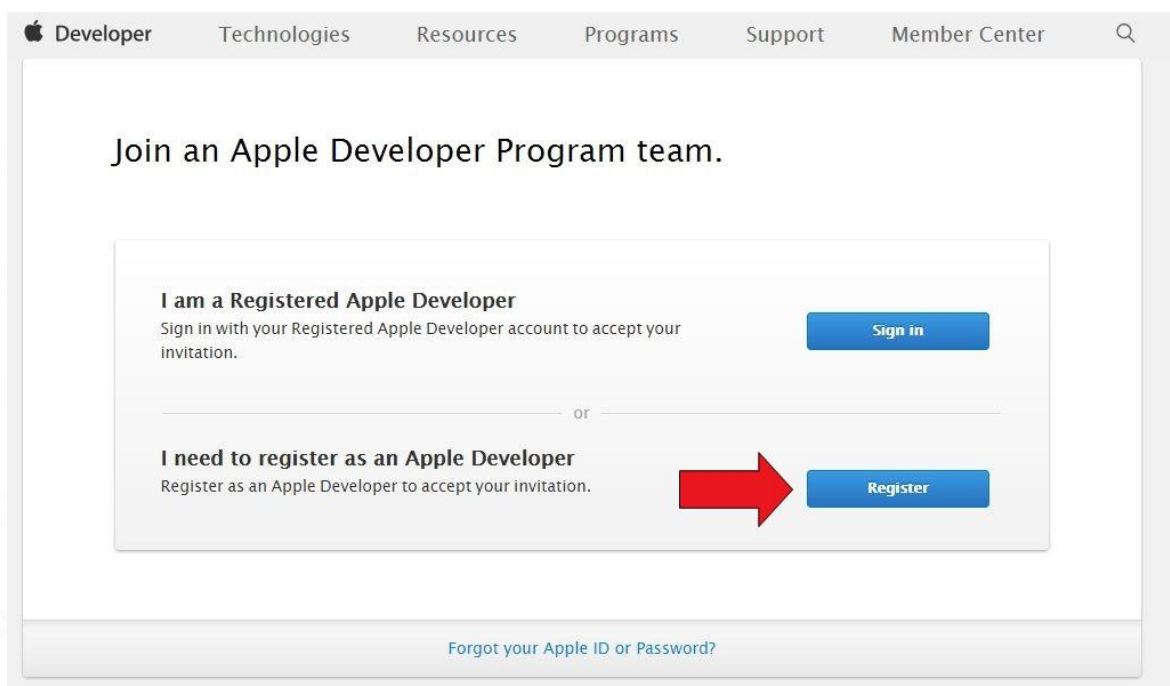
☐ Apple Developer ▶ You have been invited to join an Apple Developer Program

2. Open this email, click on the link :

You have been invited to join an Apple Developer Program

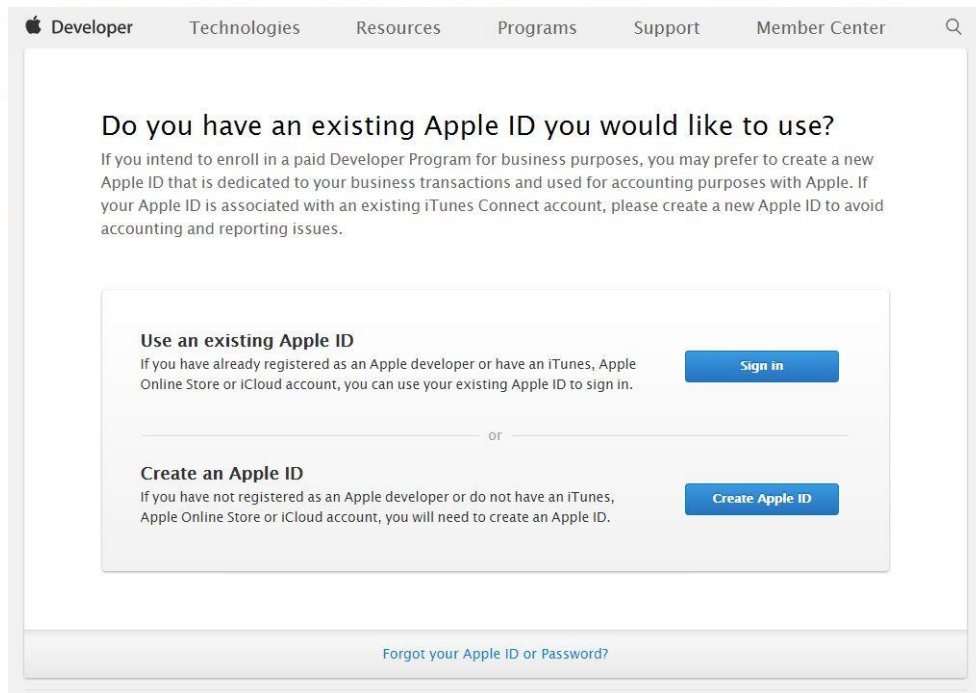


3. On the page that opens, choose « I need to register as an Apple Developer »



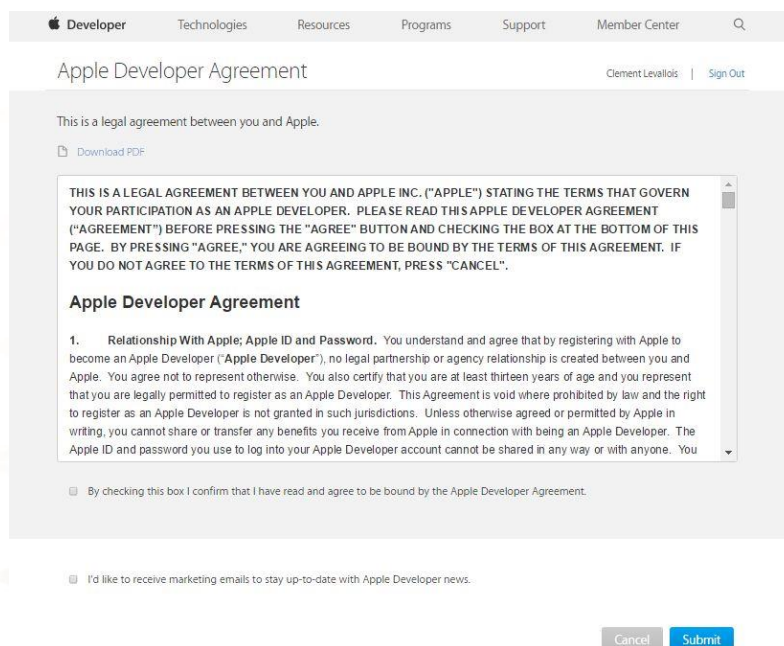
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4. Then you arrive on a screen that asks you to use your Apple id.
 - a. If you have an Apple Id (because you own a Mac, or an iPhone, or because you use iTunes...), choose « sign in »
 - b. If you don't have an Apple id, choose « Create an Apple Id »



The screenshot shows the Apple Developer website's sign-in page. At the top is a navigation bar with links: Developer, Technologies, Resources, Programs, Support, and Member Center. The main heading is "Do you have an existing Apple ID you would like to use?". Below this, a paragraph explains that for business purposes, a new Apple ID should be created. 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.

5. Then you need to agree on the license :



The screenshot shows the Apple Developer Agreement page. The header includes the Apple Developer logo and navigation links. The title is "Apple Developer Agreement" with a user name "Clement Levallois" and a "Sign Out" link. The main text states: "This is a legal agreement between you and Apple." Below this is a "Download PDF" link. A large text box contains the full agreement text, starting with "THIS IS A LEGAL AGREEMENT BETWEEN YOU AND APPLE INC. ('APPLE') STATING THE TERMS THAT GOVERN YOUR PARTICIPATION AS AN APPLE DEVELOPER...". At the bottom, there are two checkboxes: "By checking this box I confirm that I have read and agree to be bound by the Apple Developer Agreement." and "I'd like to receive marketing emails to stay up-to-date with Apple Developer news." There are "Cancel" and "Submit" buttons at the very bottom.

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



Congratulations you have a free Apple Developer account, which allows you to create certificates for your apps. These certificates will only allow you to test your apps on phones (iPhones), it is a pity they don't authorize you to put your apps on the iTunes App Store...

Anyway, **check the next page** for the steps to create certificates to put your apps on iPhones !

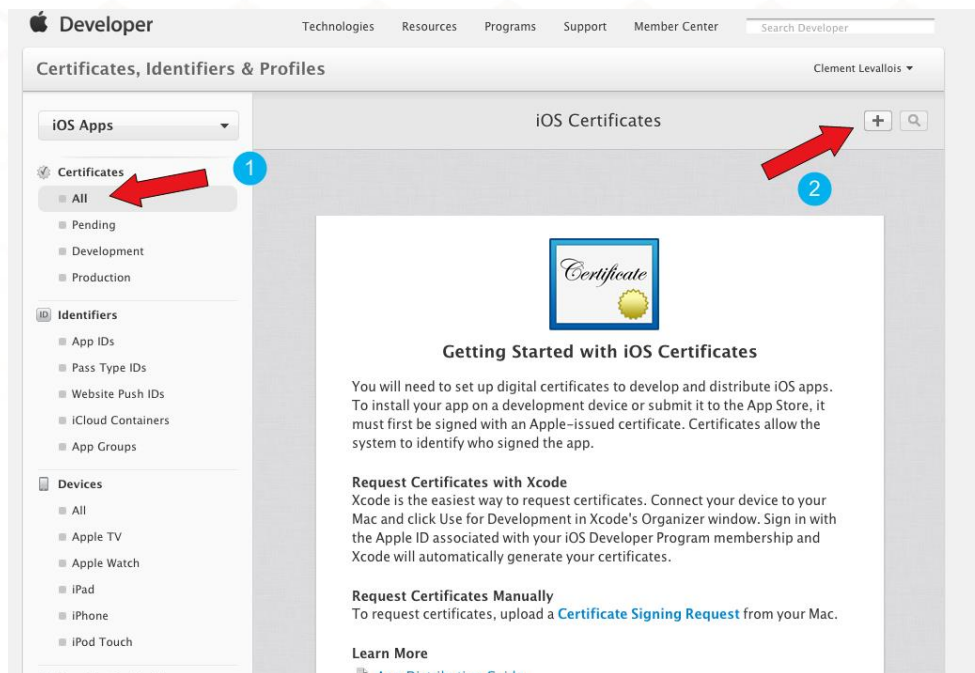
Note : you need a Mac computer, this will not work on PCs.

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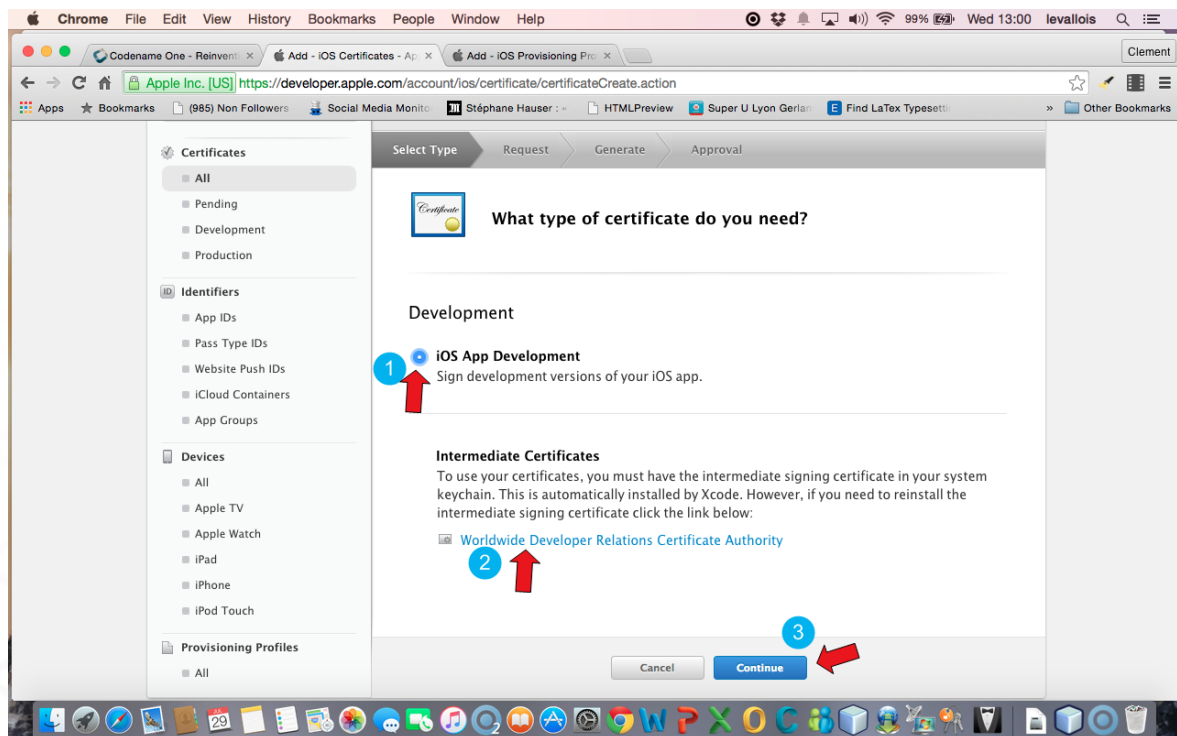
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7. Click on « Certificates -> All » then click on the + sign, to add a new certificate for your app :



2. Choose « iOS App Development », click on « Worldwide Developer Relations Certificate Authority » (it will download a file in your « Download » folder). Then click on « Continue »

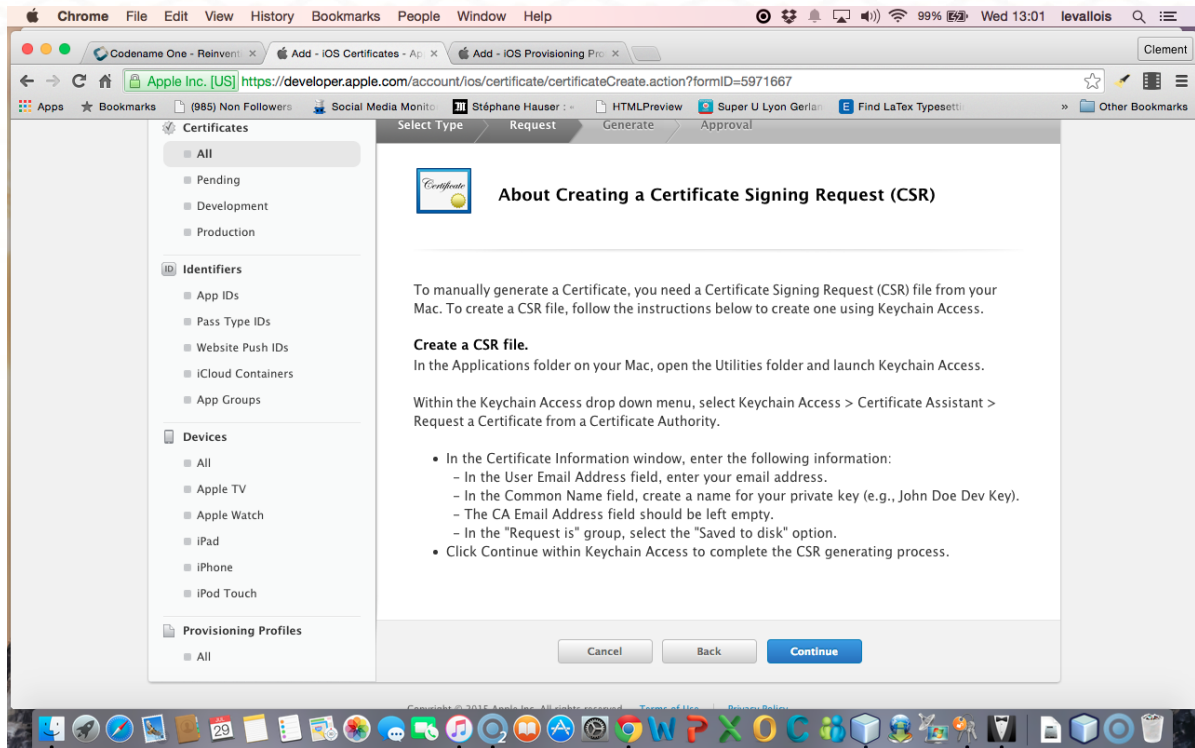


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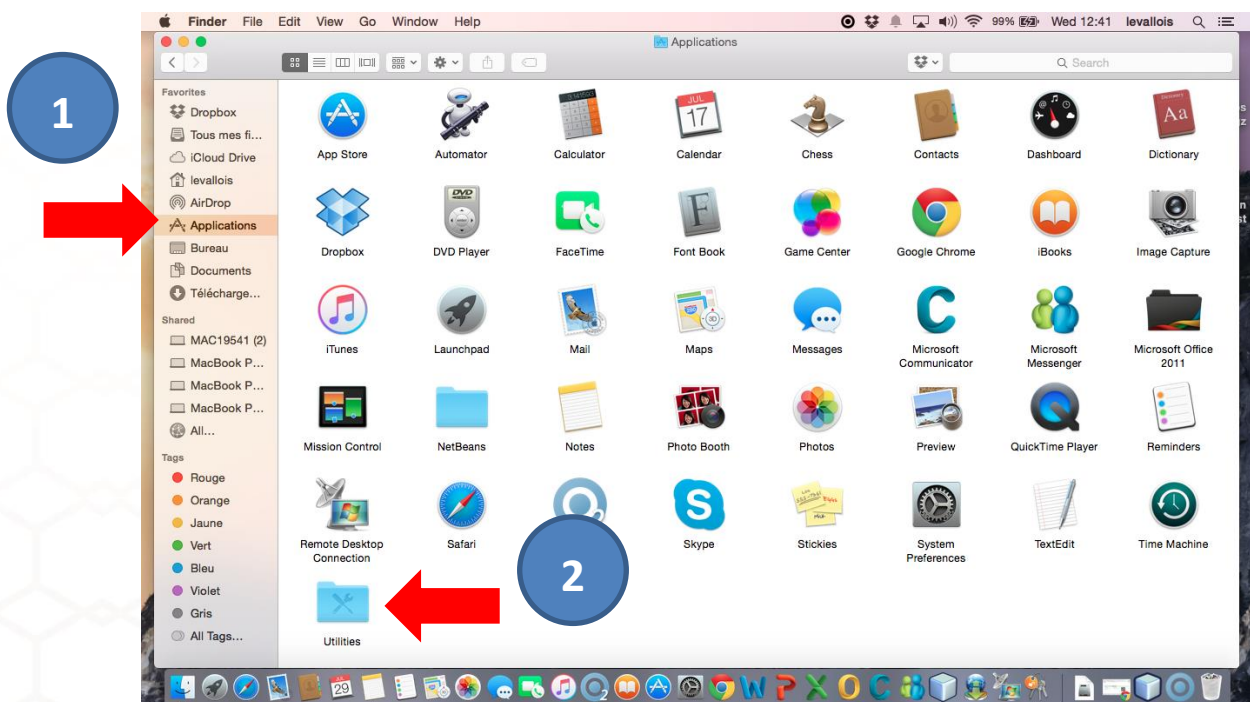
Level of difficulty: ●●●○
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8. You should arrive on this screen, stay on it :



9. In the Finder on your Mac, open the **Applications** folder (📁), and inside it, open the « **Utilities** » folder :

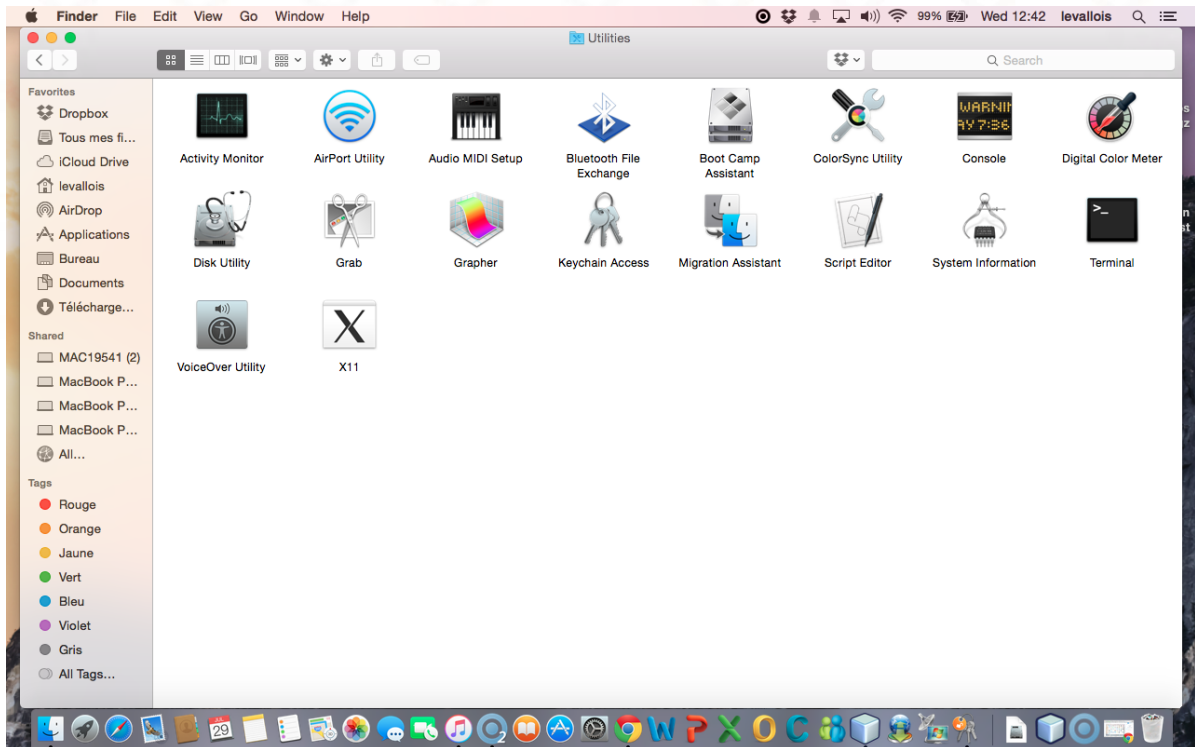


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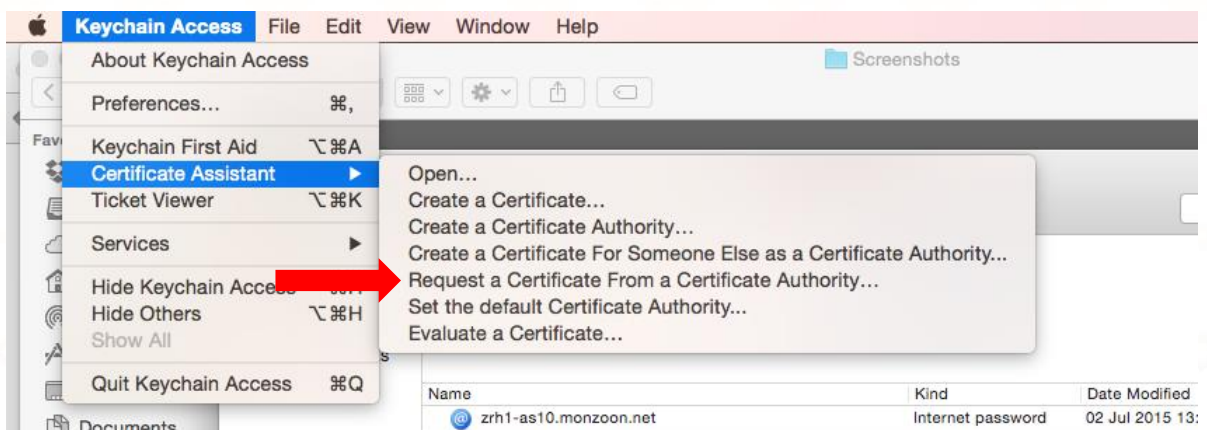
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10. In the « Utilities » folder, open the Keychain access :



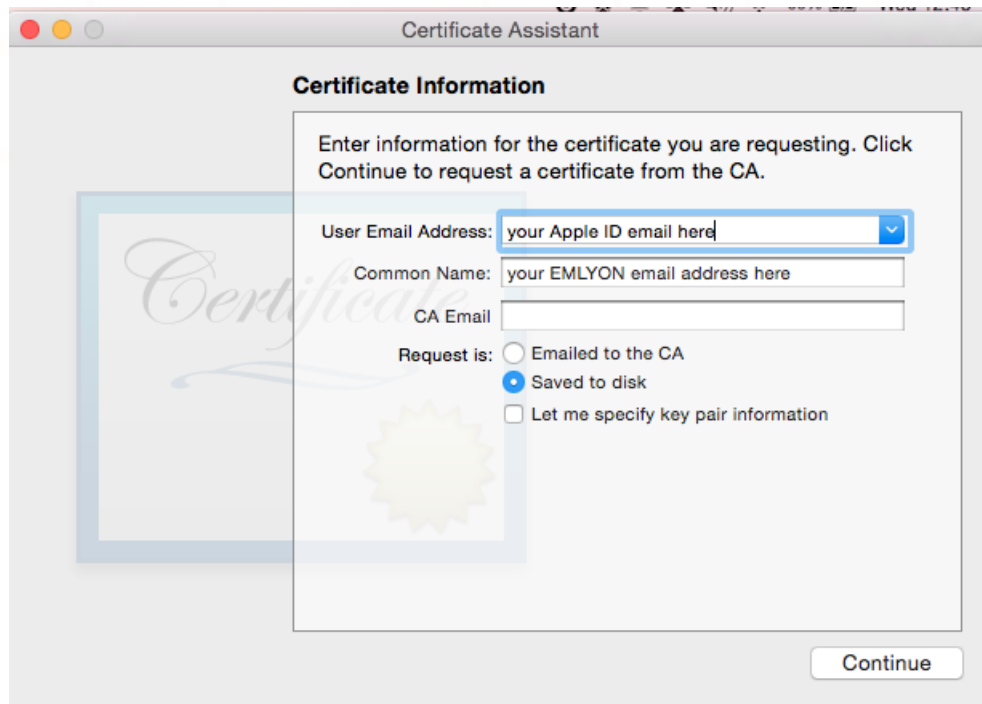
11. In the window that opens, select in the menu « Keychain access -> Certificate Assistant -> Request a Certificate from a Certificate Authority »



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12. In the small window that opens, please :

- 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.**



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

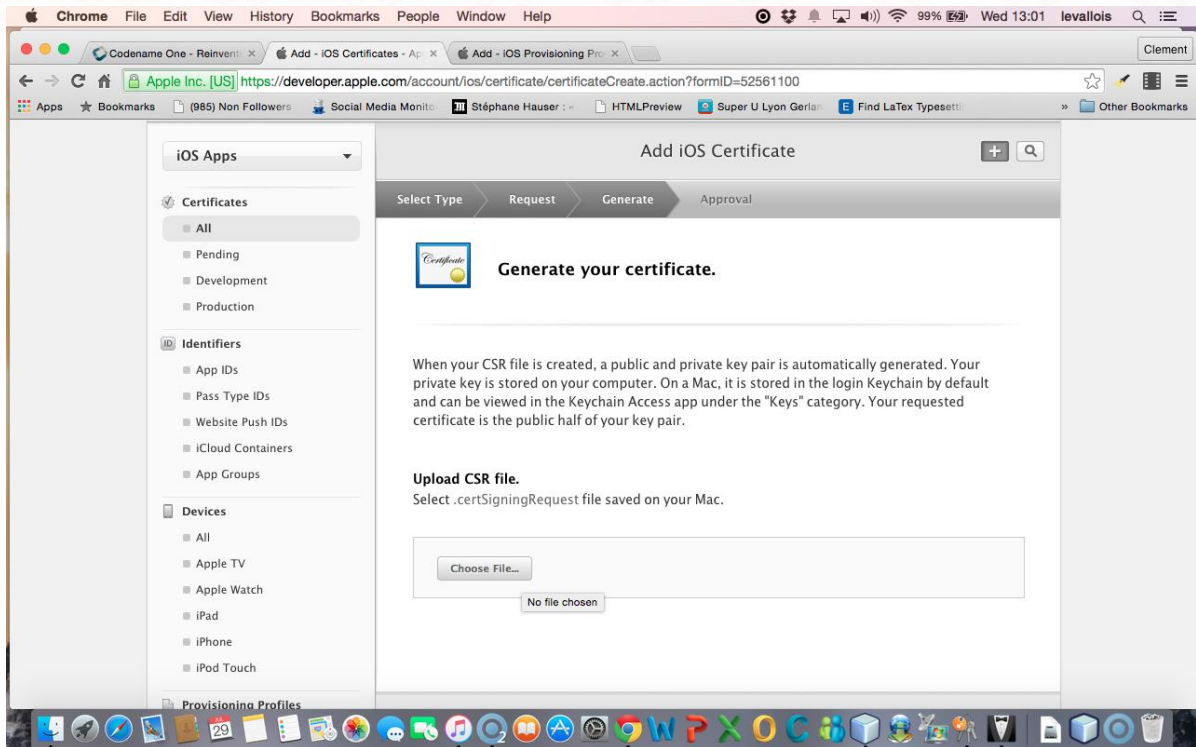
- If there is an error on the page, it just means that the page expired. Just reload it, and go back to the screen where we were at the step 8 of this document.

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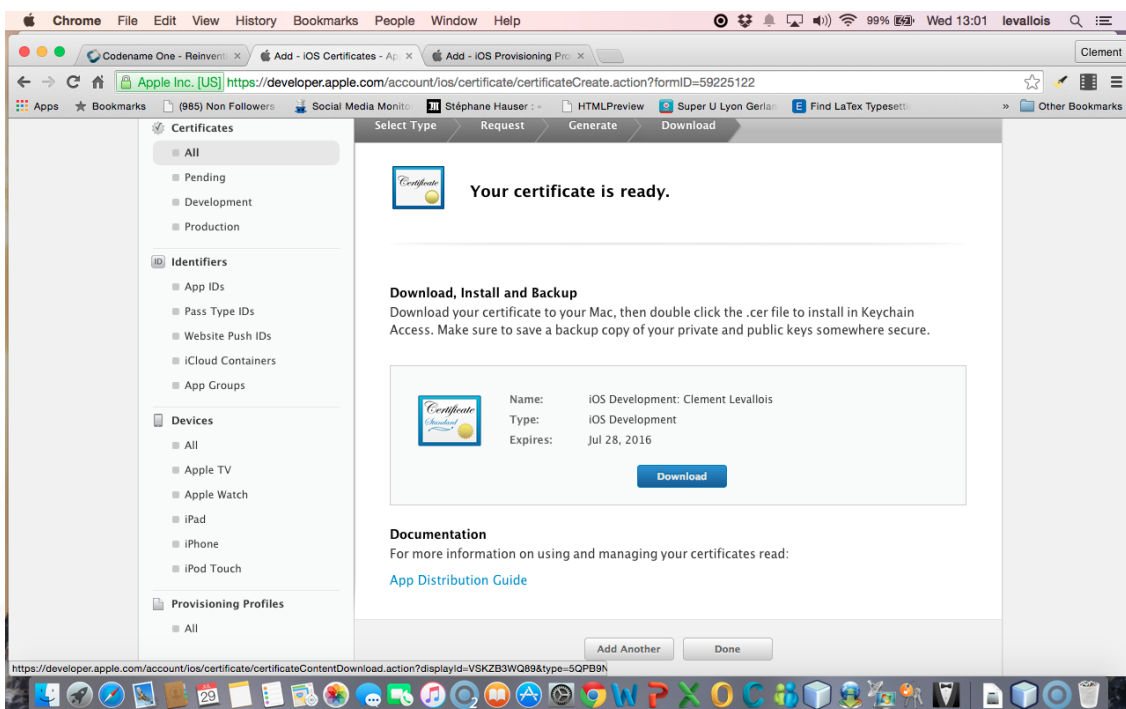
Level of difficulty: ● ● ● ●
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14. Upload the file « CertificateSigningRequest.certSigningRequest » that you just saved on your disk :



15. This creates your certificate. Now download it to your disk, in the same folder. It should be called « ios_development.cer » :



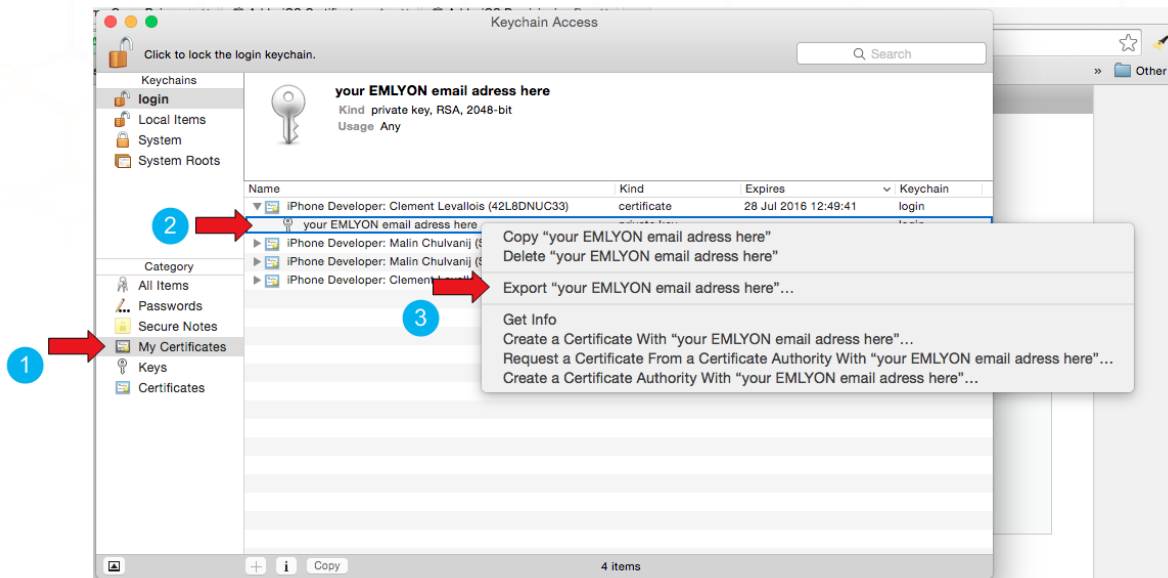
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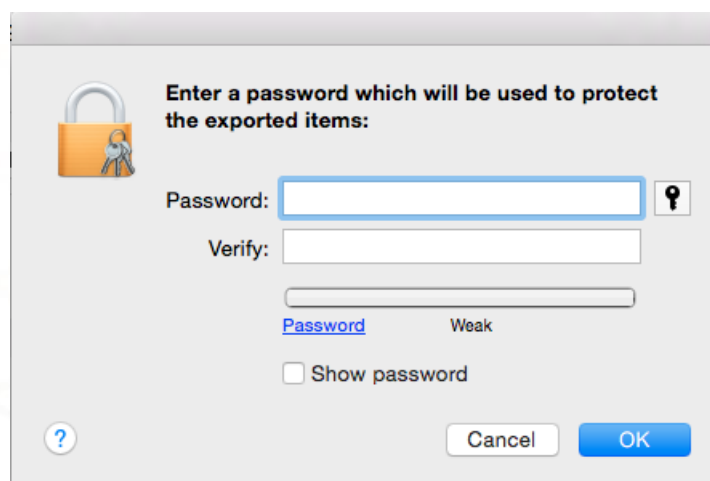
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16. Find your file « ios_development.cer » where you saved it. Double click on it. This will open the Keychain access.

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

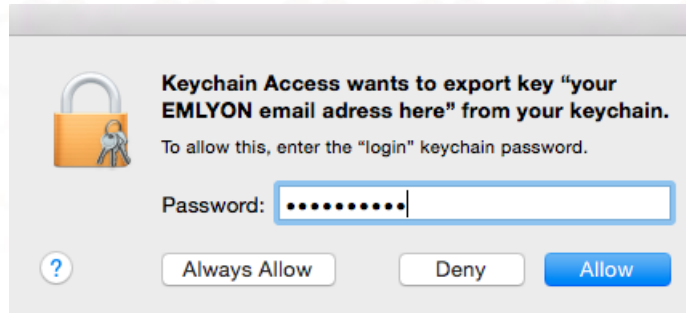


17. This opens a window asking for a password. Put “emlyon1000”



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18. 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) :



19. Finally, 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.
20. We need the UDID of your phone (anyone still reading this ? if so, you win the code #Isurvived for www.leaderboard.codapps.io)
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/>
21. Once you have your UDID, send 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 pdf, at step 22 (**see next page**):

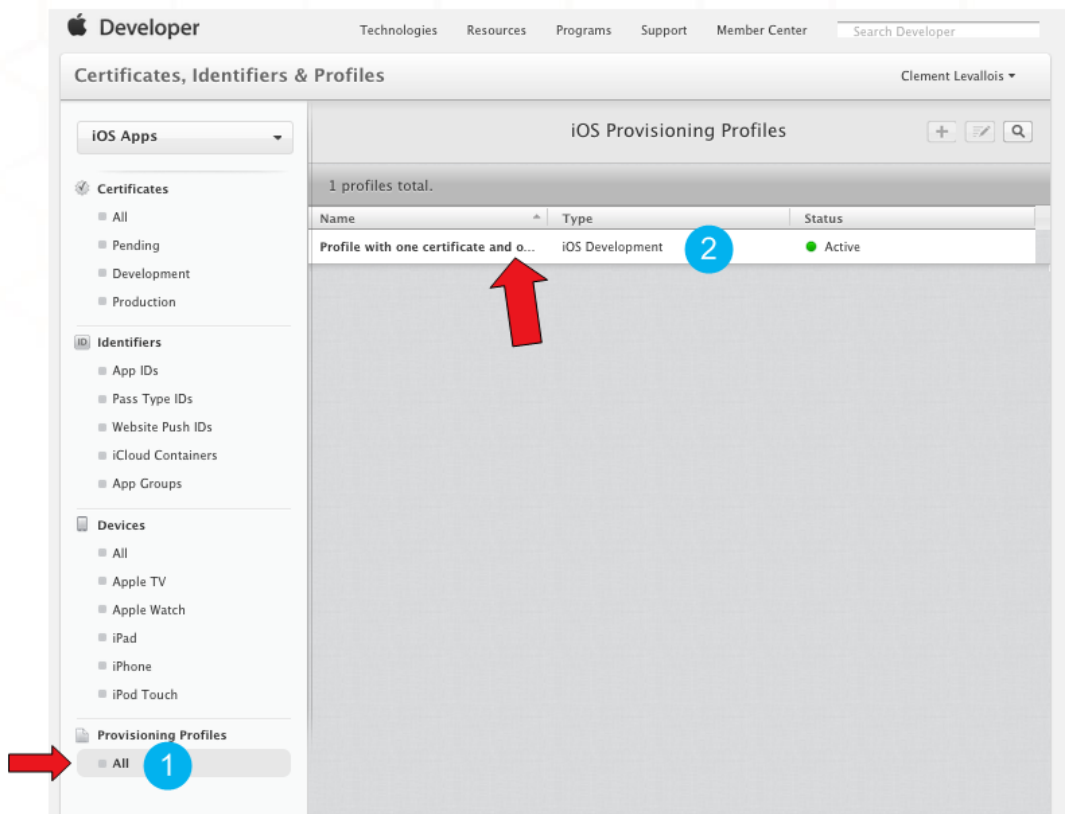
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22. Go to “Provisioning Profiles” and download the **most recent one**:

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



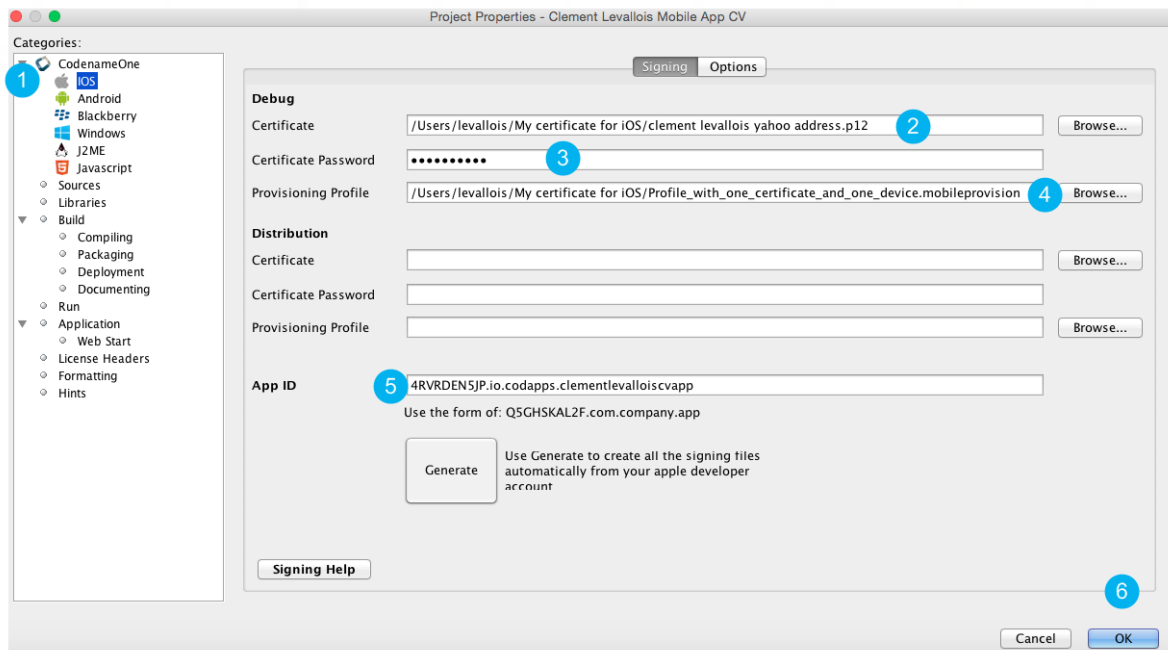
23. Now, open NetBeans, right click on the name of your project, and select “Properties” (last item at the bottom).

(continued next page)

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24. 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 at the **step 19** of this tutorial
3. For Certificate password, write “emlyon1000”
4. For provisioning profile, choose the one we just downloaded in **step 22**
5. In app ID, you must add “**4RVRDEN5JP.**” Just before io.codapps
6. Validate



25. See next page

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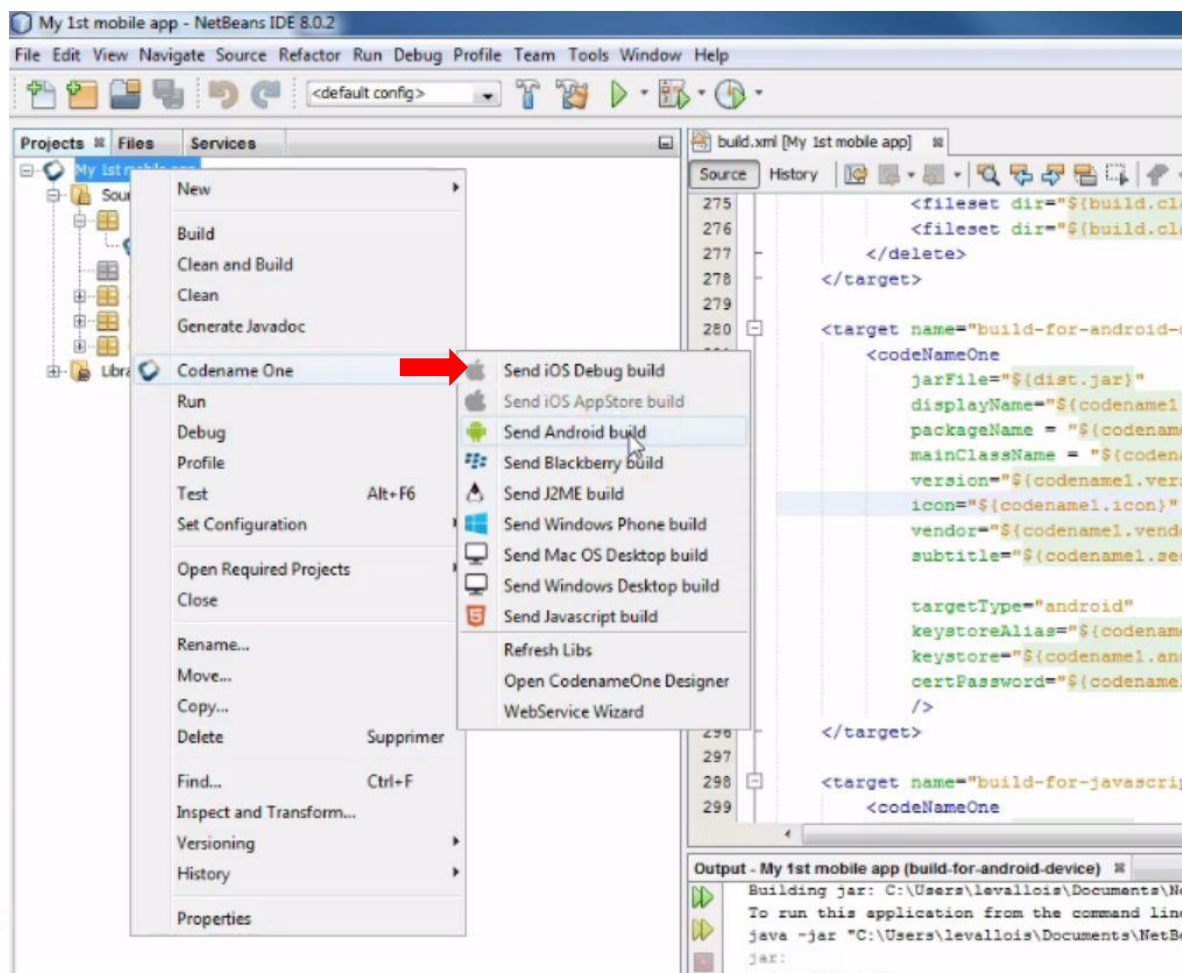
26. You need first to create a free account with Codename One (the tool we use to create apps).

To do so, visit their website at www.codenameone.com and select "Sign up".

Choose the free version. You are not obliged to choose to receive the newsletter.

Please open the confirmation email you will receive and click on the link in it to confirm the creation of your account.

27. In NetBeans, right click on the title of your project and select "Send iOS Debug Build"



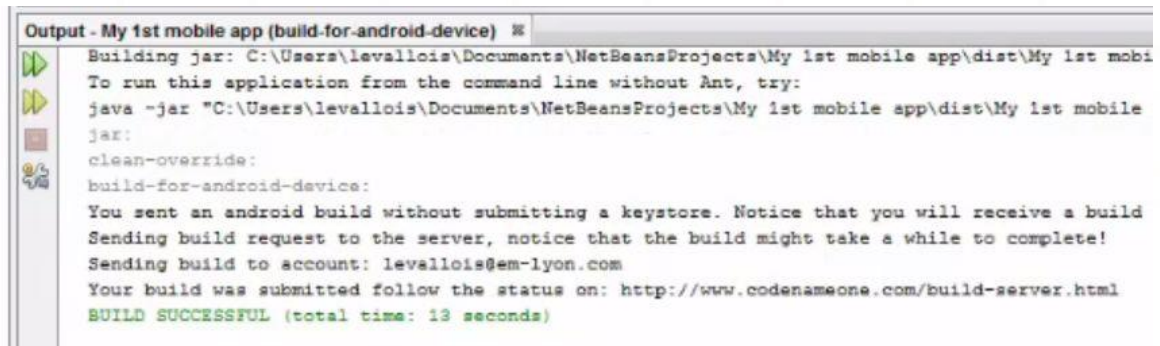
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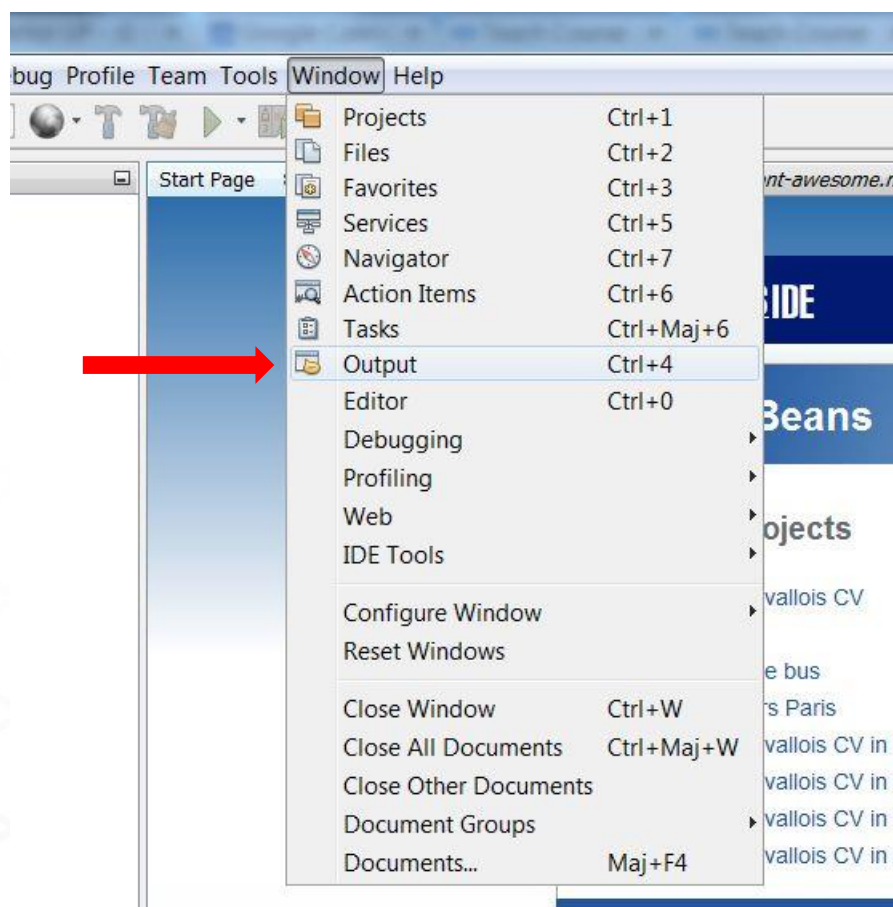
This starts the creation of package ready to be sent to Codename One. An alert windows will ask you for the login and password of your Codename One account, please enter them.

28. You know the process finished successfully when you see this in the bottom panel of NetBeans:



```
Output - My 1st mobile app (build-for-android-device) %
Building jar: C:\Users\levallois\Documents\NetBeansProjects\My 1st mobile app\dist\My 1st mobi
To run this application from the command line without Ant, try:
java -jar "C:\Users\levallois\Documents\NetBeansProjects\My 1st mobile app\dist\My 1st mobile
jar:
clean-override:
build-for-android-device:
You sent an android build without submitting a keystore. Notice that you will receive a build
Sending build request to the server, notice that the build might take a while to complete!
Sending build to account: levallois@em-lyon.com
Your build was submitted follow the status on: http://www.codenameone.com/build-server.html
BUILD SUCCESSFUL (total time: 13 seconds)
```

Note: you don't see this output window at the bottom of NetBeans? In this case, in the menu of NetBeans, select "Windows" then "Output", it should make it appear:



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29. You can now go back to the website of Codename One, where your app has been sent to create the iOS version of it. Login, then go to the Dashboard (in the menu on top of the page).
30. You will see the status of your app:
- blue -> in progress
 - green -> finished, ready to be used
 - red: something went wrong, your iOS app could not be created.
31. When the status turns green, click on it. A series of options appears to install your app on your iOS phone:
- A QR code: flash the QR code from your iPhone, this will download the app on your phone and you'll be able to install it.
 - An email link: click on it, and an email will be sent to the email address of your Codename One account. Open this email **from your phone**, click the link in it and this will start the download + installation process