

Mac Users

Step by Step Setup Guide for beginners



How To Get Started

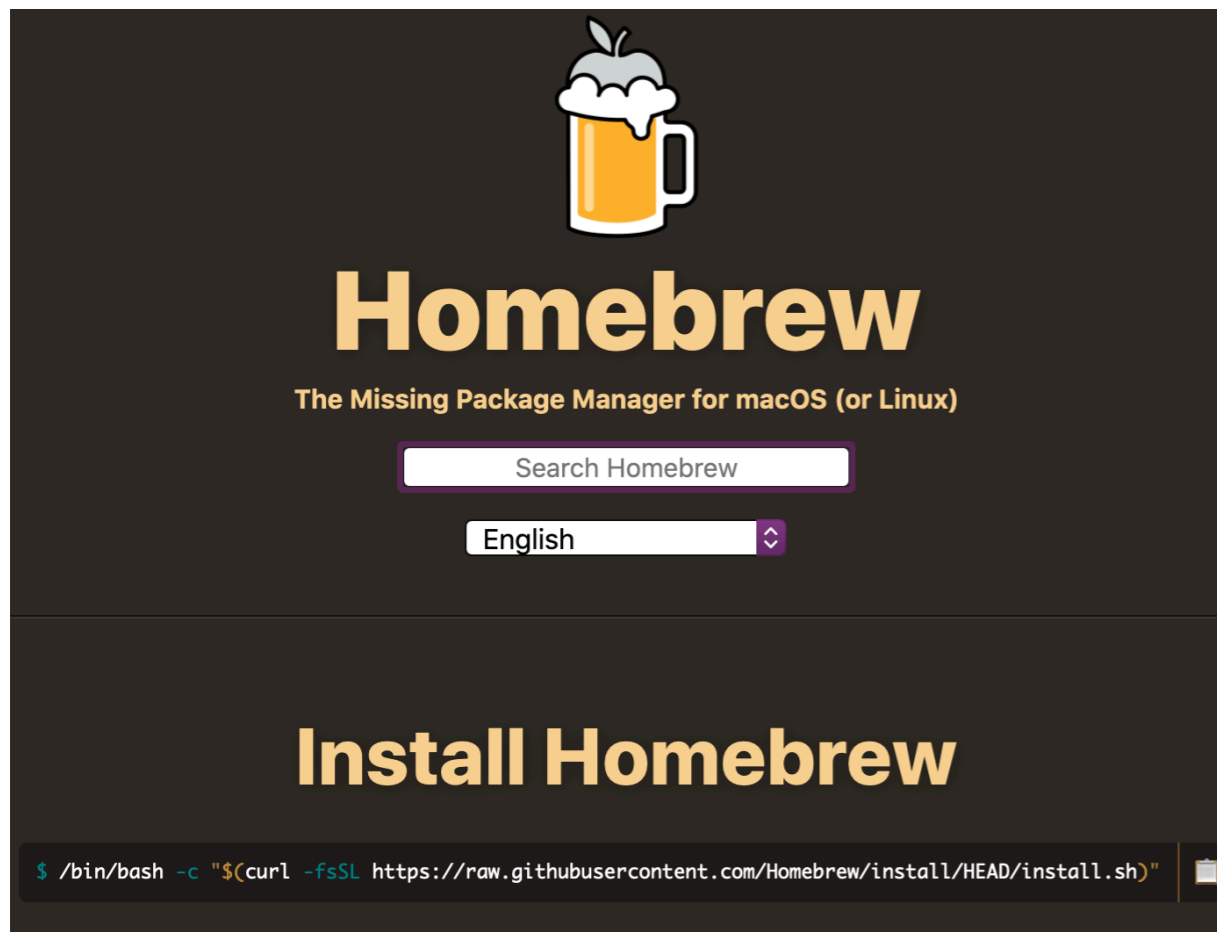
To access QORTAL you need to have two basic things in your computer.

One is called the **Qortal CORE** and the other the **Qortal UI**, BUT for you to be able to actually run the CORE, first you need Java because the CORE is written in Java. But don't worry it is very easy to get.

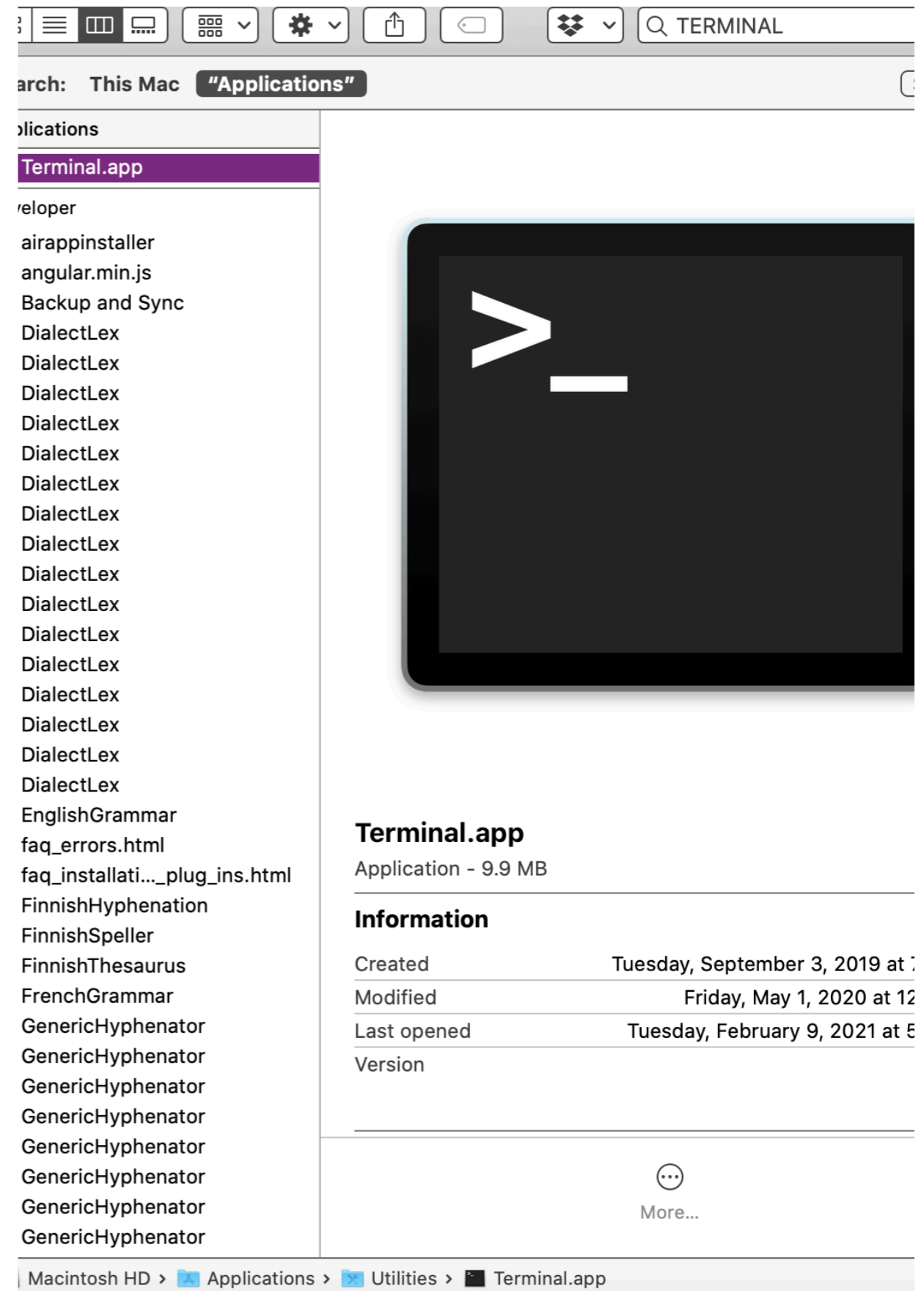
Step 1. Install Java

Install OpenJDK which is the Open Source version of JAVA.

1. Go to <https://brew.sh/>
2. You will see on the homepage (image to the left) a link: "https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh" click on the **box** next to it. This CHECKS IT and this copies the link for you to use in the Mac APP called TERMINAL. (Next step)



3. Open the Terminal App from your Application folder (SEE image to the Right) or just use Command + space bar and type Terminal. It will show it to you. Click it to open it.
4. Take the copied install Script Line from Homebrew and Paste it in Terminal. This line was put automatically in your clipboard so you just need to press simultaneously the keys **Command + V**
5. You will see the Script Line there then Push the **return** key.
6. It will ask you for a password. Your COMPUTER's password (the one you use to login to your computer). As you type your password Terminal will **NOT** show any characters, just type and trust.
7. Push the **return key**. Some code will appear.
8. Push **return** again. And the Installation from BREW will start. It will take a FEW MINUTES to complete. It depends on your internet connection.
9. You will know once it is finished when you see a line in bold that says "**==> Installation successful!**"
10. Now **BREW** is installed, which is the PACKAGE MANAGER.




11. You can check that it is so, by doing the INSTALL COMMAND for OpenJDK. In Terminal type “brew install -- (two dashes which coders call “tacks”) and without a space after the two dashes type the words: cask adoptopenjdk”. So, it will look like this:

“brew install --cask adoptopenjdk”

*** NOTE: In Terminal everything is Case Sensitive. So you have to make sure you type everything as shown in this guide. Pay also attention to spaces and punctuation signs. And type only what is in BOLD. If the Quotes “” are not in Bold do NOT TYPE THEM.

12. Push the RETURN Key. This will install Open JDK (the version installed needs to be Openjdk 11 or higher to actually RUN the current version of Qortal (as of 6FEB21)

13. After a few minutes it will ask you for your password again. Type it and hit **return**.

14. You will know if ended when you see: “ **adoptopenjdk was successfully installed!**”

15. To check it is installed you can type “**java --version**” and push **return**. In my case I got “openjdk 15.0.2 2021-01-19”

16. Once the installation is successful, then you will have ALL THE software required to run Qortal CORE.

Step 2. Download the Qortal CORE and UI

1. Go to Qortal downloads webpage: <https://qortal.org/index.php/howtoanddownloads/> and **download** CORE and UI for Mac.
2. Once the folders have been downloaded, the qortal core folder needs to be **moved from the Downloads folder to the HOME folder** so that the commands that we will use later can work:
 - a. To do this go to Terminal again and type: “**cd Downloads**” (cd is Change Directory) then push **tab key** (this appears in Terminal as a forward slash) then push **return**.
 - b. Then type “**ls**” (Note it’s lowercase L not a Capital i). This will show the LIST of files in that folder) and push **return**. A window will pop up saying “Terminal.app” would like to access files in your Downloads folder.”
 - c. Click **OK**. You will get a list of all your files in your downloads folder. You will see one DMG file called **Qortal-UI-1.4.1.dmg** and one file called “**Qortal**”

Step 3. Run the Qortal CORE

- d. Then type in Terminal “**cd ..**” And push **return**. This brings you back to the HOME folder.
 - e. Then to **MOVE** the **qortal folder** type “**mv Downloads/qortal .**” And push **return**. The last period in the previous command says to the system “Move to this folder” And since you are in the Home folder that is where the folder Qortal will be moved to.
3. Then Type “**ls**” again and that will show you the list of files in the HOME folder, you will see there now the **qortal folder**.
 4. Then change directory again to see what is inside of the folder qortal by typing “**cd qortal**” push **return** then type “**ls**” then **return**. You will see the Extracted files there:

```
log4j2.properties  settings.json      stop.sh
qortal.jar         start.sh
```

*** We will deal with the Qortal UI in Step 4.

1. In Terminal type “**chmod +x *.sh**” and hit **return**. This runs a program called **CHMOD**, which will add an executable flag to the start and stop scripts that are in the Qortal folder. Those are used to start and stop Qortal. You **won't see anything happening** in Terminal.
2. Now, to TEST if Qortal will run type: “**./start.sh**” and hit **return**. You will see a Flash screen for a second with the Logo of Qortal right in the middle of your screen. It will **disappear**.
3. Look at the Taskbar (located at the top of your screen where the Time and Date, the Wifi connection are shown), there you will now see a **Qortal Icon**. Hover over it. It will tell you what the Status is, what the Height is, which is the current BLOCK YOUR NODE is on.
The Qortal Core should always be running on your system, unless you stop it, it freezes or you turn off your computer. It keeps TRACK of the BLOCKCHAIN and synchronizes everything. It has the main API and it is what the UI (User Interface) communicates with to actually execute transactions on behalf of your account. **You want to keep the Qortal CORE running ALL The time.**

4. Now that the CORE is running all you need to do is just WAIT and let it **Synchronize**.
It will take several days to fully synchronize. If you want to speed up the Synchronization, you can use the Bootstrap that Jason created on Feb 4, 2021. (I have included it later in this guide too). BUT THIS IS NOT necessary. Again the Core is now running and as long as you see it is synchronizing you are good.

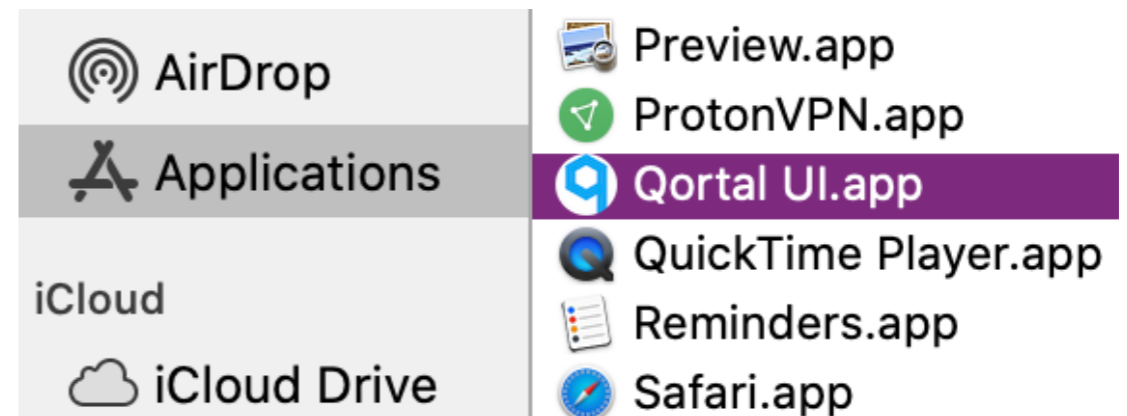
Step 4. Install the Qortal UI

The UI (**U**ser **I**nterface) is used to create accounts, to use Q-Chat and other functionalities like Wallets and the Trade Portal. This UI is what most people will use.

1. In Finder App go to your downloads folder and find the file called "**Qortal-UI-1.4.1.dmg**"
2. Double click it. A window will open. You will see a Qortal logo an arrow and the Application folder.
3. Just take the Qortal logo, drag it and drop it onto the Applications folder.
4. Then you can **Eject** the UI installer in Finder and also **delete** the **.dmg** file.

Step 5. Open the Qortal UI

1. Go to Applications folder and double click the icon for Qortal.



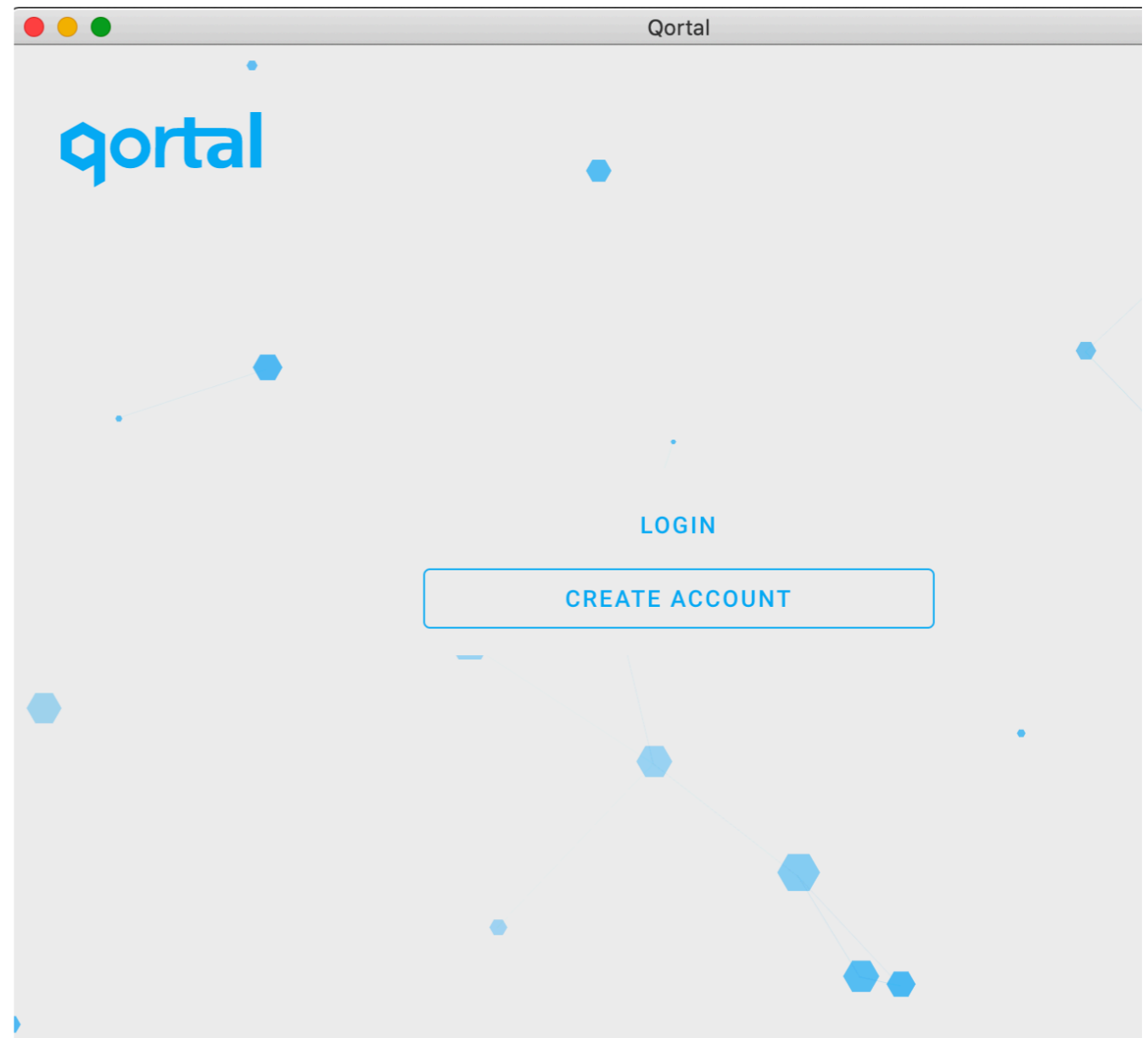
A new window will open saying "**Qortal UI.app** cannot be opened because the developer cannot be verified." And you will get two options, Move to Trash or Cancel.

2. Click Cancel
3. Go to the **APPLE icon** at the top left on your screen, click on it to get the menu. There, click on **System Preferences**.
4. Inside System Preferences click on **Security and Privacy** icon then select the **General tab**. There towards the bottom you will see "**Qortal UI.app** was blocked...." Simply Click on "**Open Anyway**"

5. You will get another window saying: **“macOS cannot verify the developer of “Qortal UI.app”. Are you sure you want to open it?”** By opening this app, you will be overriding system security which can expose your computer and personal information to malware that may harm your Mac or compromise your privacy.”

6. Just select **OPEN**. The Qortal UI will open. It looks white with Qortal icons moving across the surface. (See image to the right)

At this stage you won't be able to do anything in the UI, except creating an account, until your Core is fully synchronized. (Again, you will know the percentage of synchronization by hovering the mouse on the Qortal CORE icon in the taskbar). It will take a few DAYS for it to be synchronized.



Optional Step - Use Bootstrap

To expedite the synchronization process you can use a BOOTSTRAP. A Bootstrap in terms of Blockchain is an actual **copy of the synchronized blockchain** or one that is more close to being synchronized. So you can download that which is quicker than downloading each block individually. The idea basically with the Bootstrap is that it will **replace** your current **db folder** with the downloaded one (bootstrap) this will bring you to a **Higher Block** to start synchronizing from.

1. Exit the Qortal Core and the UI.

Right-click the Core Icon on the task bar (Black and blue) and click "Exit".

Click on the Qortal UI icon also on the task bar (aqua blue) and click on "Quit".

When using a bootstrap it is best to keep the OLD DB file as a backup instead of deleting it. The Bootstrap will have another DB folder that will have to be moved to the Qortal folder to replace the old DB file. (DB = Data Base)

2. To make a backup of the old DB folder:

- a. Open Terminal. Type "**cd qortal**" and push **return**.
 - b. Type "**mkdir backup-db**" and push **return**. This makes a new directory where we will move the old DB folder.
 - c. To move the old DB folder to the new folder we just created above, type "**mv db backup-db**" and push **return**.
Now you have a backup of the old database in the backup folder.
3. Download the Bootstrap from <https://cloud.crowetic.com/s/6rDwKQji3tARNcx>
It will take a while to download it is a large file (4.1 GB).
4. Now we need to move the downloaded new DB folder (Bootstrap) to our Qortal Folder where the Backup-db folder is now too. Type "**mv ../Downloads/db .**" And push **return**. To check it was moved, type "**ls**". You will be able to verify the list of folders/files within the Qortal folder.
5. Now we can restart the Qortal Core again by typing "**./start.sh**". **This is HOW TO START the CORE, which is always done from Terminal App**. If you restart the computer you will need to do this to have the Core running. So that it keeps synchronizing.

6. Edit the “**settings.json**” file in your Qortal folder:
 - a. In Terminal.app , stop the Qortal Core by typing “**./stop.sh**” and push **return**.
 - b. In Finder App, locate your **qortal folder**, which should be in your Home Folder. Inside the Qortal folder you will see a file called “**settings.json**” Put your cursor on top and right-click it. A menu will pop up. Select Open With > TextEdit.app
 - c. Once the file is open in TextEdit.app type:

"maxPeers": 66, (push **return**)

"minBlockchainPeers": 8, (push **return**)

This allows 8 peers so more connections with the rest of the network. Peers are used to verify data.

Then ENABLE API documentation by typing :

"apiDocumentationEnabled": true hit **return**

(There is no comma here because this is the last line out of the three)

So it will look like this:

```
{  
"maxPeers": 66,  
"minBlockchainPeers": 8,  
"apiDocumentationEnabled":true  
}
```

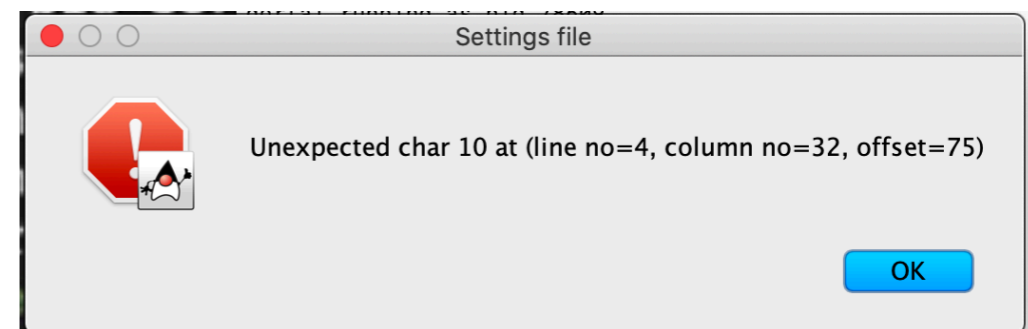
NOTE: You have to be extremely careful here, type

*everything exactly as it looks in the bold blue text, make sure your “quotes” are straight. I had issues with this, for some reason my Mac had slightly inclined quotes and then that gave me an error **later on**.*

- d. Close the file and TextEdit. You have updated your settings.json file!

7. Now the Qortal CORE can be restarted. Go back to Terminal.app and type:
“./start.sh”

*If after you attempt to start the Core you get an error, it means you did not type everything exactly as it looks in number d. (to the left). But don't worry just open again the “**settings.json**” file in TextEdit so you can correct any errors. This is the error I got because one of my quotes was slightly inclined:*



Additional Steps

Now that your core is fully synchronized. You can **Create an Account** in your UI so that you can access:

- Q-Chat (Qortal messaging system)
- Register a Name
- Your Wallet
- The Trade Portal

In **Q-Chat** you can ask for more help, also ask for some coin so that you can Register a Name and if you want to Mint request sponsorship.

Crowetic uploaded two great videos showing you how to create an account in the UI:

<https://www.youtube.com/watch?v=beSNXOp4ggo>

and also how to use the Trade Portal and Register a Name:

[https://www.youtube.com/watch?](https://www.youtube.com/watch?v=iBSsjqgfeh&t=622s)

[v=iBSsjqgfeh&t=622s](https://www.youtube.com/watch?v=iBSsjqgfeh&t=622s)

This guide was put together with much love from a non-technical person, hoping to aid as many as possible to get onboard. If I could do it, you can too! - Helena 😊💙💙💙

