

# SETForSeQ USER MANUAL

## Installation

For Windows case (version 10), execute the file *MyAppInstaller\_web.exe*. If the Windows Defender popups, click on “More information” and “Run”.

For macOS case (version 10.13.6 or later), follow the section: macOS installation (click on the link).

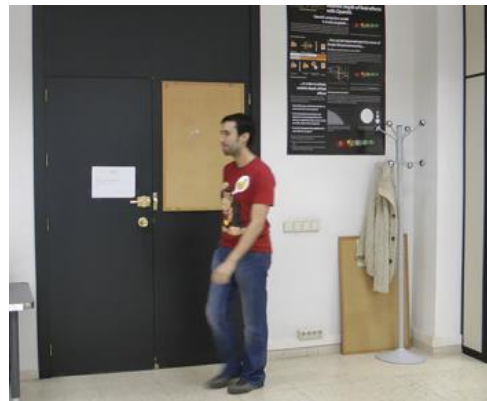
Both Matlab Compiler Runtime (required unless already installed) and SETForSeQ (Subjective Evaluation Tool for Foreground Segmentation Quality) will be downloaded and installed. While downloading and installing (it takes several minutes), it is recommended to continue reading these instructions.

## What to take into account when doing the test?

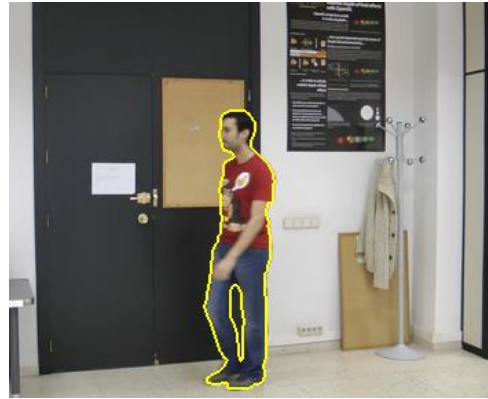
Segmentation of moving objects (foreground) is one of the main tasks within the field of artificial vision, useful for cases such as video surveillance, object tracking, augmented reality and much more. The goal of these tests is to draw conclusions about the visual assessment of users.

During the test, three types of images will be shown:

1. Original image: captured by the camera.

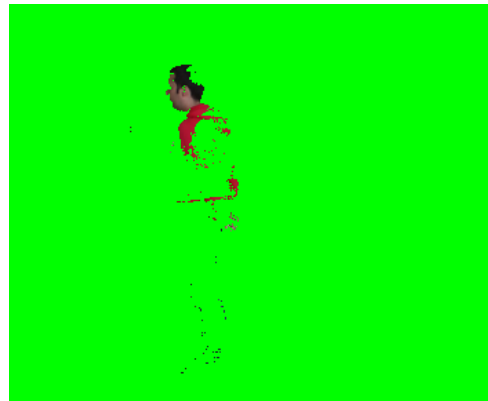
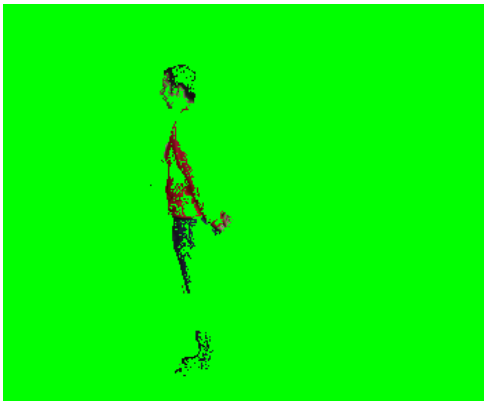


2. Original image with the moving object contained in a yellow outline.

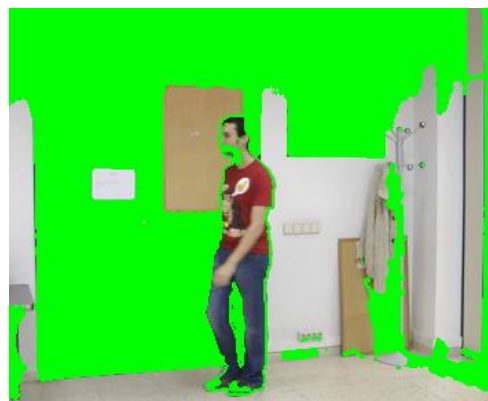


3. Image resulting from a segmentation algorithm. The truth is that the existing algorithms are not perfect, and basically present two types of errors:

- Part of the object disappears (or all of it, in extreme cases):



- The object incorporates pieces of the background (which shouldn't be there):



A high-quality segmentation result would look something like this:

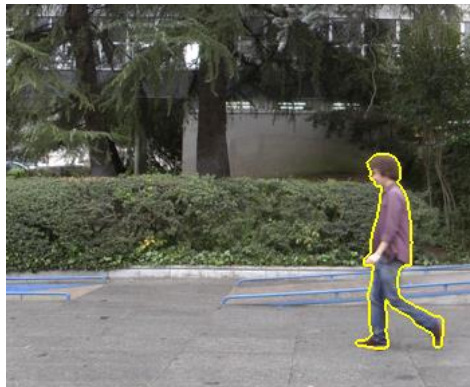


## Tool operation

1. The first thing to do is to open the installed program, double clicking on its icon. It is recommended to create a shortcut on desktop, otherwise the file is located by default in:

"C:\Program Files\UPM\SETForSeQ\application\SETForSeQ.exe"

While loading (it takes several seconds), this image will appear:



2. When it finishes opening, the following screen will appear, where you have to fill in the fields (name and surname, email, age, sex and test number). The test is divided into 2 parts so as not to make it too tiring, and the user has rest between them, being able to do it at different times, hence the selection of the test number (first select the option 1 and then the option 2). It is recommended to leave at least 15 minutes between one and the other. Each test consists of 85 images and it is done in less than 10 minutes.

Finally, click on the "Start experiment!" button.

Background Questions

Name and surname

Email

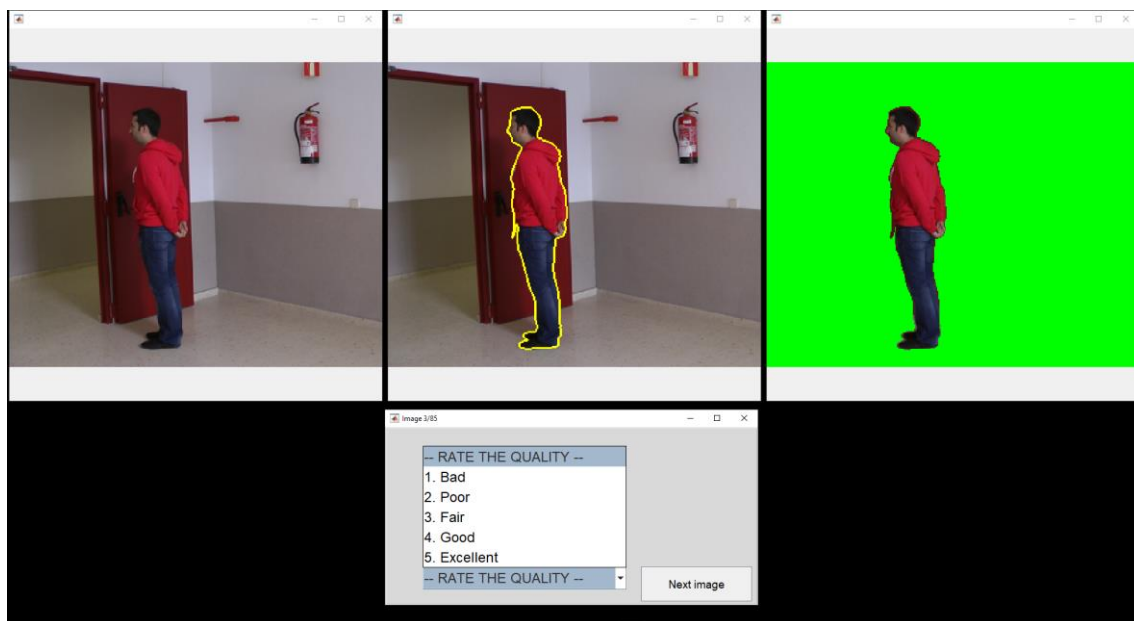
Age:

Gender:  
 Male  
 Female

Test #  
 1  
 2

Start experiment!

3. Once the button is pressed, four windows will appear, with the three images described above and the popup menu with the answers:

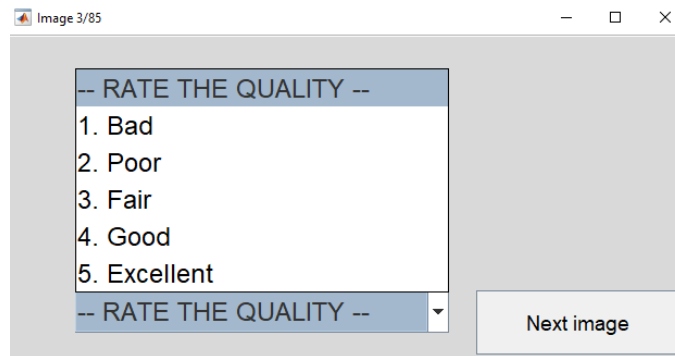


During the test, the three images will be shown simultaneously, and, taking as reference the first two, the image on the right side will have to be evaluated, on a 1 to 5 scale, being:

1. Bad
2. Poor
3. Fair
4. Good
5. Excellent

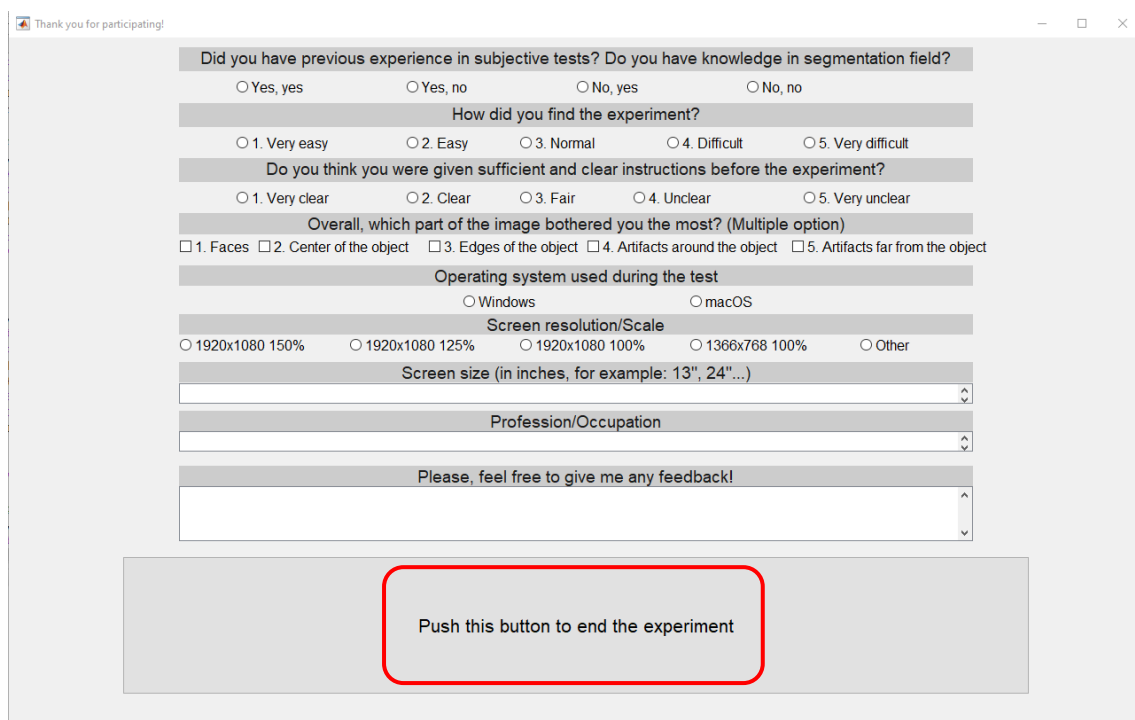
By way of training, the first six images that are shown provide a reference of typical segmentation qualities, which will allow the user to get used to how to perform the test.

The options will automatically be displayed, and to mark them the mouse or the keyboard can be used, using the arrows and the space bar.



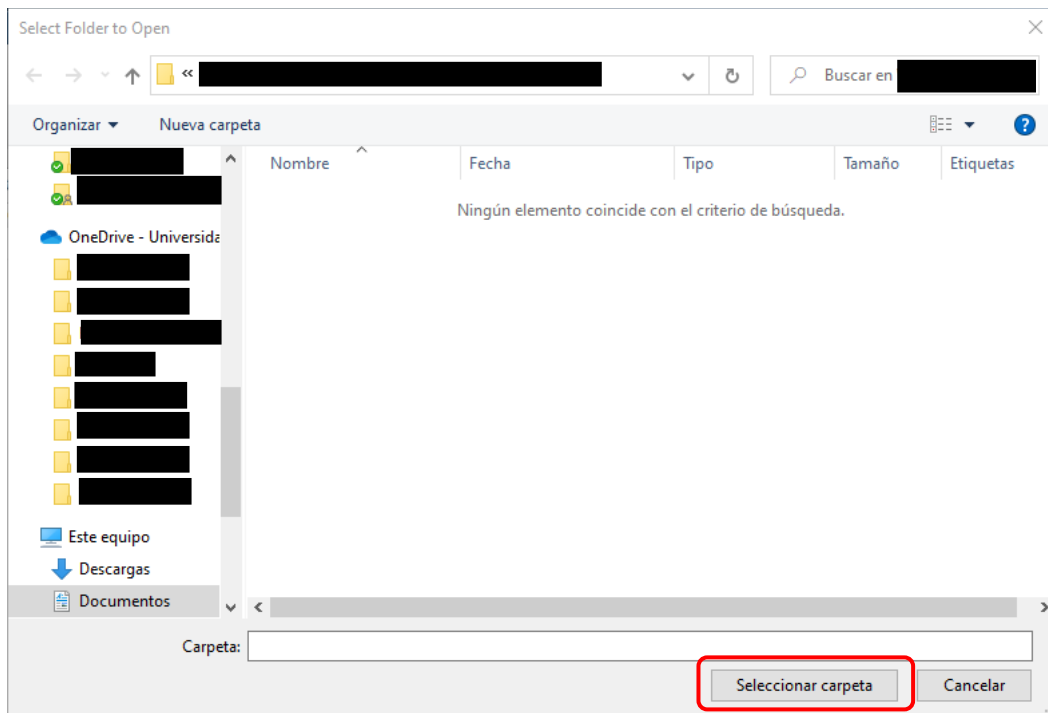
Ideally, the object contained in the yellow outline would be the only thing visible in the result image along with the green background. This is not an exam, there is no right or wrong answers, but it is important to observe the images carefully before selecting an option and moving on to the next image.

4. After completing all the images, some final questions related to the test will appear. For the question “Screen resolution/Scale”, it can be found in “Configuration/System/Screen”.



To end the experiment, click on the “*Push this button to end the experiment*” button.

5. This will open a window to select where to save the file created. It is recommended to select the desktop or any other easily accessible folder.



Once the folder is selected, the file corresponding to the selected test type will be found in it. After completing the two tests, two files should appear:

- datos1\_NameSurname.mat
- datos2\_NameSurname.mat

6. **In order to comply with the General Data Protection Regulation, it is mandatory to fill out and sign the consent document for the use of data for research purposes, available on the website. A photo or a scan of the signed document can be sent.**

7. The last step is to mail those three files (two data files and the filled and signed consent document) to the following address:

[jbh@gti.ssr.upm.es](mailto:jbh@gti.ssr.upm.es)

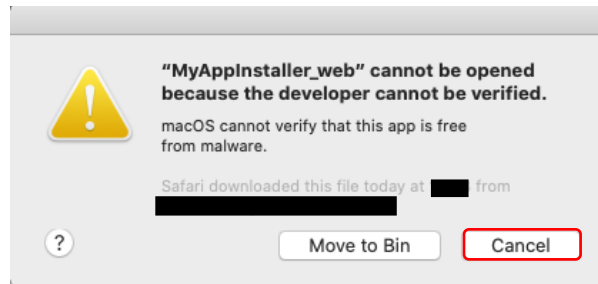
To uninstall the programs:

- Windows: in “Control Panel/Uninstall programs”, look for “SETForSeQ” and “MATLAB Runtime”. Right click and “Uninstall”.
- macOS: in “Applications”, look for folders “UPM” and “MATLAB”. Right click and “Move to bin”

And that would be it, thank you very much for your collaboration having participated in this test.

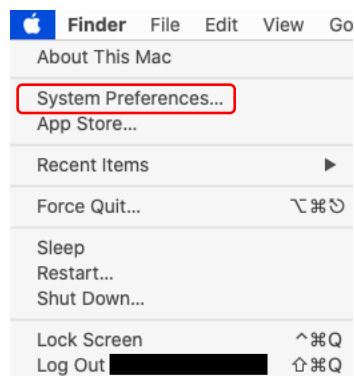
## macOS installation

1. When opening the downloaded file, the following message will pop up:

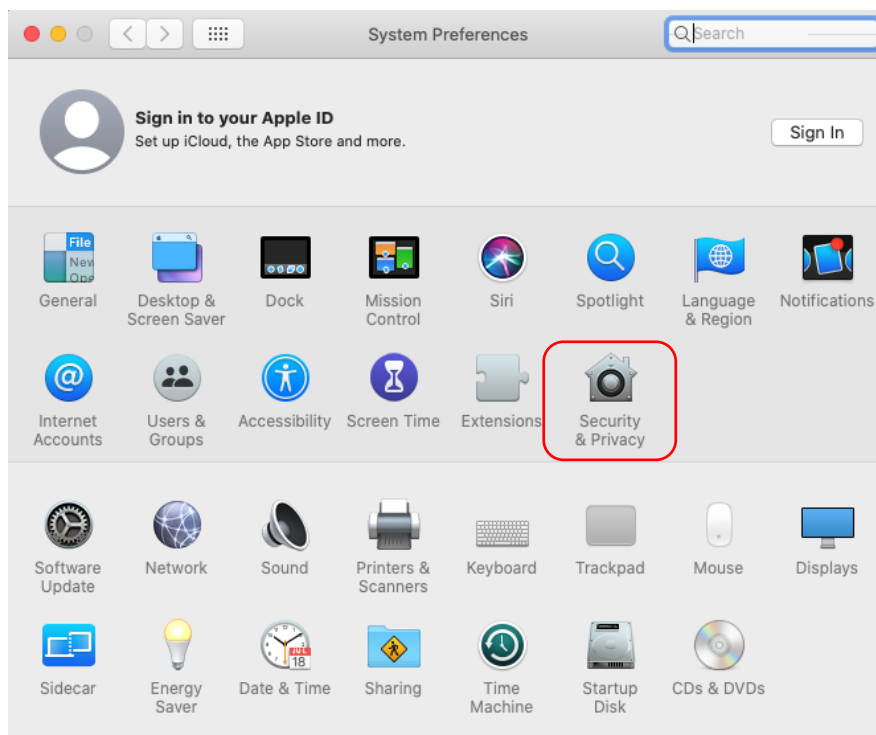


This is because macOS does not recognize the developer. Press on "Cancel".

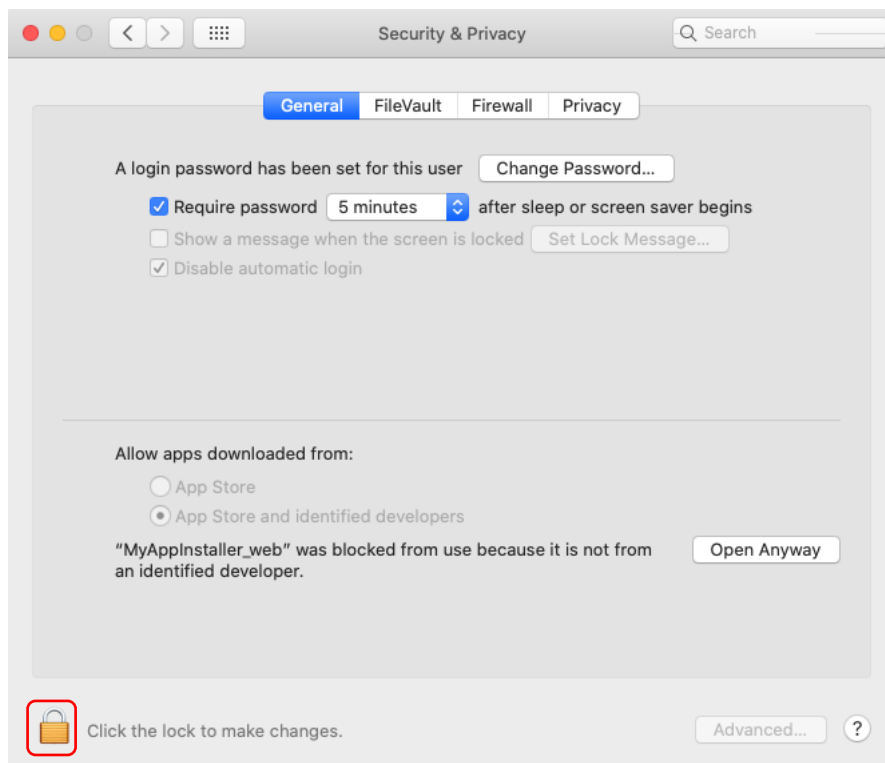
2. Click on the Apple logo and then on "System preferences...".



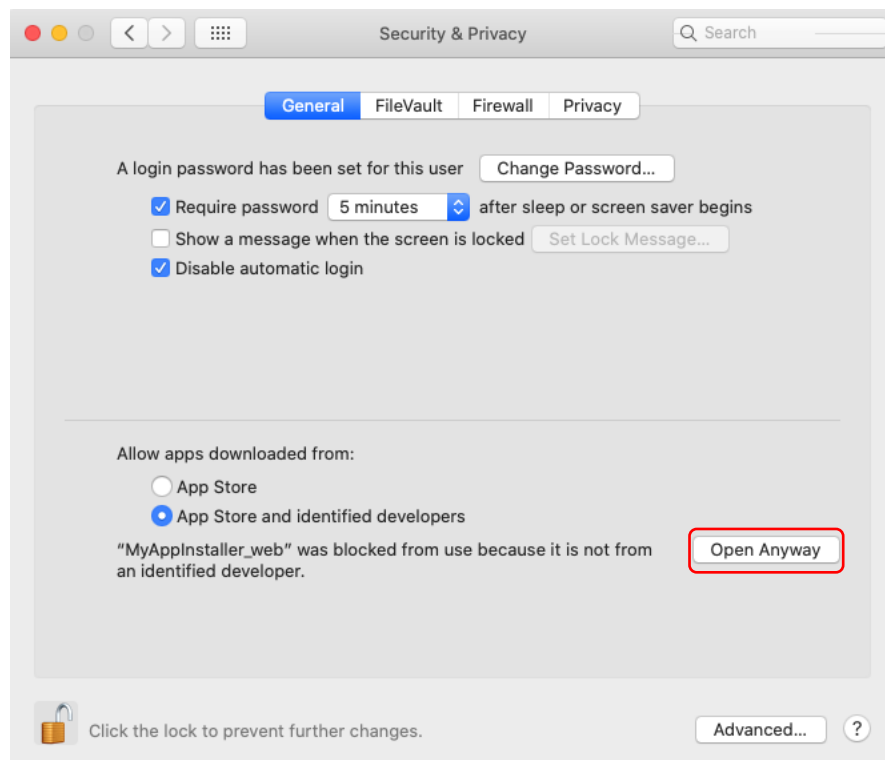
3. Select "Security and Privacy".



4. On the “General” window, click the lock to make changes.

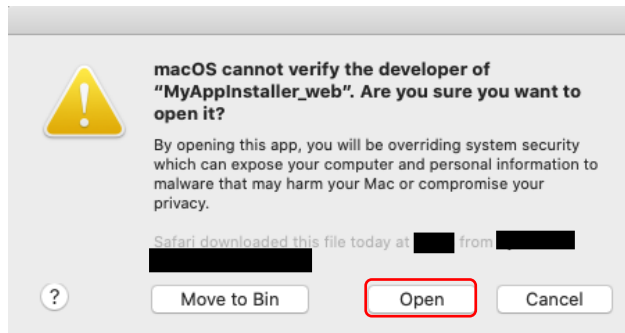


5. Select “Open anyway”.

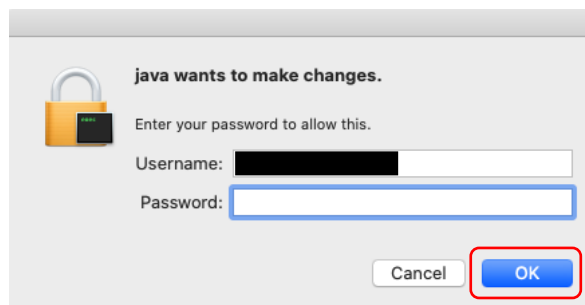




6. The next window will popup, select “Open”.



7. Finally, the following window will popup. Write the password so that java can make changes and accept. This does not affect the operating system; it is necessary only during the execution of the program.



8. The file to run is located by default in: “Applications/UPM/SETForSeQ/application/SETForSeQ”. By double clicking on it, the program will start.