# MapleM Automation Script

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## Introduction

Inspiration taken from: <https://github.com/jothamgoh/maplestory_mobile_autoquest_bot>

It’s important that you’re able to figure out things well, as this is not a plug-and-play solution, u’ll need to do some modifications and troubleshooting when necessary, otherwise it probably wouldn’t work. Even though I have provided some crash course below, but it’s impossible for me to teach everything to people with no coding experience, so initially I was contemplating whether to even share this or not. So only proceed if you think it’s worth to give it a try. And turn to Google and ChatGPT first when there’re errors (try yourself first), and turn to me if you cannot resolve it on your own.

Also, “setting it up” would probably take a few days or more than a week, as there could be errors popping out here and there, but once it’s resolved then u can use the program to run your dailies for a long time.

While I’m 99% sure there’re no ways to detect this, as it’s similar to regular mouse clicks or finger presses, but I’ll leave 1% room for errors or to be proven wrong. So use at your discretion tho, personally I’ve been using it for > 1 month.

## Motivations

Repetitive tasks are time-wasters and can be automated.

While it’s often possible to run dailies while doing something else e.g. watching entertainment shows, but it has led to a point where I have to watch entertainment show just so that I can do dailies, even when there’re times when I want to spend the time on something else instead.

Or sometimes I just want to be in the moments of the activities I’m engaged in.

Or sometimes after a long day the last thing I want to be doing is still have the obligations to run dailies, it’d prob be nicer to chill and rest for the next day alr.

## Preparations

Firstly, go to <https://www.anaconda.com/download/success> and choose the appropriate option for your system to download Anaconda. This package also installs “Jupyter Notebook” which is necessary to edit the code.

Follow through the below steps:

A screenshot of a computer

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After installation, press Windows button and search “Anaconda prompt”. Python programming language would already have been installed along with Anaconda.

In the command prompt, type the below commands and enter, one at a time.

pip install pyautogui

* Pyautogui is a library developed by a random guy, that allows system to develop a match between screenshots sent in for processing and images seen on the screen, and thereafter perform actions (such as mouse clicks, keyboard movements) on the screen.

conda install -c conda-forge opencv

* As mentioned above, the system would be finding a match between the images that are sent into and images on the screen, this package allows the system to perform the match based on how close of a match they are, e.g. a 70% match. I found a confidence of 0.7 to be pretty reliable.

Enter “y” when prompted.

Thereafter, type “jupyter notebook” and enter. This will open up Jupyter Notebook application in your web. A black screen with a white border

Description automatically generated

Download the file/ script I’ve given and placed it into a folder that u’ve created. (This can be done like how u do usually, no need to do within Jupyter notebook). The script should be in the same folder as the screenshots in the later steps. Then, refresh the webpage and locate the file in Jupyter Notebook web and open it.

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A screenshot of a computer

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## Crash course

Some background knowledge in programming might be necessary for you to understand, modify the code and carry out troubleshooting when necessary.

By default, all code starts at the beginning of each leftmost line.

A white background with black text

Description automatically generated

However, when coming across a code like this, the indented code is within the larger code. For example, pyautogui.click and print(counter) is within the “if” function, and the “if” function is within “while not” function.

Indentation can be introduced by going to the beginning of the line (Home Button) and pressing on “Tab”, and it can be reversed by pressing on “Shift + Tab”.

A close-up of a white background

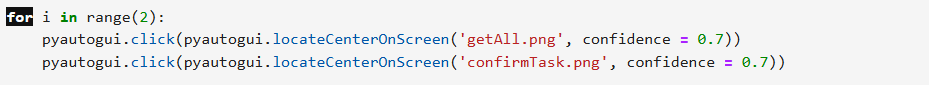
Description automatically generated

“def” are functions that I defined to use in my main body (“while not”), so that the functions can be reused by calling the function name without needing to write the whole body.

A screenshot of a computer program

Description automatically generated

for loop, will repeat the actions within it, in the below code, it will run from i = 0 to i = 1, 2 is being excluded. The actions within it will be repeated twice.



## Learning to see the errors and Self-help

A screenshot of a computer

Description automatically generated

There’re no shortcuts to learning how to navigate the errors, it might seem intimidating at first with the whole chunk of text, but just take your time go through it and u’ll get better at it over time.

Start by reading from the bottom, “ImageNotFoundException”, going upwards, u can see “---> 41” which indicates the line of code that causes the program to stop running. Going up again, it says that “highest confidence = 0.178”, with such a low decimal (1.0 being 100%/ a perfect match), it probably means there’s no such image on the screen that match the screenshot.

Personally for myself, “ImageNotFoundException” usually means I’ve not yet open up my window where the game is supposed to run in. Hence, it can’t detect any matching image. Sometimes it could also mean I need to retake my screenshot if the screenshot taken previously is not accurate.

Also, if you’re unsure, you can copy-and-paste the errors in ChatGPT/ Google. But ChatGPT wouldn’t be able to pinpoint the issues you’re facing entirely, for e.g. it can be as simple as you didn’t open up the window or any other reasons, hence you’d still need to exercise your own judgement and that’s why ideally you need to be able to figure things out well to make this work.

## Testing individual components

Scroll down the notebook and go to the testing site. This is how it looks like.

A screenshot of a computer

Description automatically generated

If you want to test a portion of the dailies, for e.g. dimension invade, this is extracted from the main body:

A screen shot of a computer code

Description automatically generated

Just copy from here onwards, ignore the “if not dimension\_invade\_clicked”

A screen shot of a computer code

Description automatically generated

Replace the code under Testing Site and run the cell. But remember to insert this line before the body, so as to allow yourself some time (3 seconds) to switch back to the window you’re running your game at.



## Putting it all together

The program code is already done, you’ll only need to replace the screenshots, as well as x and y coordinates. Since everyone’s window size can be of different resolutions, and scaling.

There’re texts highlighted in Turquoise color, these are not code but rather comments explaining what the code is doing. I’ve inserted comments here and there explaining what I’m doing, so u can check it out.

If you’re interested to insert your own comments, you can select the text you want and press on “CTRL + /”.

And to begin with, there’re a few pre-requisites that u need to set. It’s attached in the below 3 images.



A screenshot of a video game

Description automatically generated

DI, Guild, Mulung, ED, DD needs to be seen in the menu.

A screenshot of a video game

Description automatically generated

Going to the main topic, u need to run the first 2 cells in the Jupyter notebook, when u run the second cell switch back to the window where you’re running the game at. I’ve imposed time.sleep(3) to have sufficient time (3 seconds) for switching back. A screenshot of a computer

Description automatically generated

I’ve inserted explanations for the main body of the code, u can just read through.

When the code is running, [\*] would be displayed at the top left of the cell. It will change back to a number e.g. [7] when the code runs finish, or the program crash.

A screenshot of a computer

Description automatically generated

Also, u need to retake the screenshots in the game. So probably run dailies a few times in a few days to make sure you take all the screenshots required, just refer to my folder to see what screenshots need to be taken, or run through the dailies yourself.

While I’ve thought of scalability of this script to allow ppl to use directly without having to go through so much hassles, unfortunately this library has limitations. While there’re probably more advanced libraries out there, since this is the first time I’ve created such an automation script, I don’t think I want to redo it. Hence, you do need to take all the screenshots required. Straightforward way is “WIN + SHIFT + S” to take screenshots.

A screen shot of a computer code

Description automatically generated

Figure 1 Replace the screenshots

When you come across smth like this, it’s referring to the x and y coordinate.



And u can obtain it by running this cell, switch back to the game window, and position mouse cursor at the desired location. A screenshot of a computer

Description automatically generated

When you’re done running the code or done for the day, just return to Anaconda Prompt and press “CTRL + C”, it will close the execution.

## A more straightforward shortcut to run the program (ignore until u’re able to run your code reliably across multiple days)

Generally u can ignore this step until you’re sure the program can run reliably across multiple days.

A more straightforward way to open up the program is right-click on your Desktop -> New -> Shortcut -> “C:\Windows\System32\cmd.exe /K cd "C:\Users\<your name>\OneDrive\Desktop\Maplestory m Bot" && python cbMapleScript.py”

“C:\Users\<your name>\OneDrive\Desktop\Maplestory m Bot” -> replace the directory to where your folder for the script and screenshots are being located.

“cbMapleScript.py” -> replace the name of the script to the name of your script.

This will open up a command prompt directly and run the script.

If the command prompt aren’t running, u need to carry out the installation in the command prompt, since it’s different from anaconda prompt.

python

pip install pyautogui

conda install -c conda-forge opencv