**Instructions on how to deploy changes via Git/Heroku & local files**

Firstly, log in to Heroku: <https://id.heroku.com/login> using the following details:

Username/Email: emma.macdonald.2019.100@uni.strath.ac.uk

Password: Malawi720#

Head over to the ease-microgrid project and select the deploy tab. Scroll down to “Deploy using Heroku Git” and download and install the Heroku CLI. You will be greeted by a new download page, scroll down, and select the appropriate installer as required:

Graphical user interface, text, application, chat or text message

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Go through the installer executable, **keeping all settings default** and installation path.

Git also is required to be installed as the Git command prompt is used in conjunction with Heroku, Git also allows changes to be tracked as are any files that will be uploaded. Use the following link and select the “Downloads” page on the left-hand side of the page:

<https://git-scm.com/book/en/v2/Getting-Started-Installing-Git>

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Download the latest source release, click on “Download for Windows.”

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Go through the installer executable, **keeping all settings default** as you see them.

Upon completion of the installation, you will see Git CMD available on your recentl addded applications (click windows key), drag the icon onto the desktop for accessibility purposes.

Open the Git CMD application and run (case sensitive):

heroku login

You will be prompted with the following message: “Heroku: press any key to open up the browser to login or q to exit:.” As the instruction implies, press any key and login using the same details as previously shown.

**Cloning the dashboard contents**

Continuing on from the previous steps, you can choose any location as you desire for the dashboard files to be saved locally on your PC. For example, you may wish to save onto some folder on your desktop:

cd C:/users/Aaron/Desktop/Test\_Folder

Thereafter, clone the contents:

heroku git:clone -a ease-microgrid

You have now successfully cloned the contents of the dashboard which includes the source code and excel spreadsheets into the desired directory.

**Uploading updated code and/or files**

The aforementioned directory will be your primary place of work, i.e., all changes **must be** saved to that source code within as are any files to be modified/uploaded in the same folder.

**You will always be required** to log into Heroku (heroku login) via the command line and change the working directory using the (cd) command before proceeding on.

Assuming the former has been completed, save all your changes, and run the following sequentially:

git add .

git commit -am “some update message”

git push heroku master

It may take some time depending on the number of changes and/or the speed of your computer.

You have now successfully uploaded changes and the updates should be made apparent immediately in <https://ease-microgrid.herokuapp.com/> .

**Side Note**

In some instances of the code, namely, dashboard\_prototype.py source code, you may be required to access the data frames (Excel spreadsheets) to be read in. As Heroku has an “ephemeral” hard drive, i.e., some virtual short-lived arbitrary place stored within their cloud servers you cannot use absolute path of the file directory, rather, **relative** file path which refers to a location that is relative to a current directory (i.e., some place in their cloud servers). As you may have already seen from the code, the following code specifically achieves this:

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This will allow any file to be read in relative to where the source code is saved, i.e., within the same folder no matter where the overall folder is stored.