
EE-3233

Systems Programming for Engineers

Lab Assignment 6

This assignment has a high difficulty level, start early.

Your task now is to complete the provided `mcomplex.py` script. Here, you must now define the behavior of the `*` and `/` operators to do the operations that have already been documented in the script.

Furthermore, the complex class should also support a new data attribute distance (`d`), which can be calculated via the Pythagorean theorem as follows:

$$d = \sqrt{r^2 + i^2}$$

Therefore, by using `d` you should be able to override the `>` and `<` operators to compare the “magnitude” of two complex numbers.

Tips/Hints

The `+` `-` `*` `/` operators instantiate a new `complex` object and return it as a result, as already done in the provided script. However, the `>` and `<` operators should instead return `True` or `False`. This behavior has already been documented in the provided script.

Finally, remember that you can copy-paste the code in the provided script directly to your VM instance in GCP.

Deliverables

You must upload the script with your solution, named with the following format:

`<name-of-file>_<first-name>_<last-name>.py`

For example:

`mcomplex_andres_hernandez.py`

Report-like submissions in PDF format will no longer be accepted.

Grading

- Your solution will be evaluated with a script to check if your solution is correct.
- Partial marks will be granted for cases where the output is partially correct.
- No marks (0/30) will be granted to scripts that simply don't run.

Furthermore, following the syllabus, your script will be evaluated against MOSS (<http://theory.stanford.edu/~aiken/moss/>) to detect similar code.