

Introductory C++ exercises

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The files for this are on Github.

To check out the repository run:

```
git clone https://github.com/EPCCed/APT-CPP
cd APT-CPP/exercises/complex
```

Task

You have been provided with a simple, *partial* implementation of a complex number class and an associated test program. Your task is to alter the `complex.cpp/complex.hpp` files until the tests compile and run correctly! (Please don't edit the `test.cpp` program!). To compile, you need a C++17 capable compiler - on Cirrus the default `gcc` module is fine - then just use `make`.

This initial program fails:

```
$ module load gcc
$ make
c++ --std=c++17 -I../include -c -o complex.o complex.cpp
complex.cpp:6:24: error: out-of-line definition of 'real' does not match any declaration in
double const& Complex::real() {
                    ^~~~
./complex.hpp:13:10: note: member declaration does not match because it is const qualified
    double real() const;
```

You need to start tracking down the bugs and fixing them.