

This project implements the *Strategy Pattern* with the `MobileRobot` class.

The `MobileRobot` must be updated to use the new `Translation` class. Much of the functionality in the `Tracked` class must be implemented in the `TrackedTranslation` class which extends `Translation`. The functionality of the `QuadRotor` class, likewise, must be implemented in the `QuadRotorTranslation` class; also a child of `Translation`.

This assignment is worth a total of 10 points:

- Up to 7 points for successful compilation and correctness,
- Up to 3 points for correctly following the Google style guide, and

Directory

We will continue using the following directory structure:

- **bin**: To contain executable binary files.
- **build**: To hold the intermediary .o object files.
- **include**: All .h header files will be located here. I have provided you with the public interface of all files I am testing.
- **lib**: A library of useful classes for your project. Normally this directory would hold true library archives which would get compiled into linkable libraries. That is outside of the scope of this class. I have provided you a makefile for this directory and you may make all the .o files you need by running “make library” from either the root directory `05hw/`, or the lib directory `05hw/lib/`. Check the `05hw/lib/test` directory for examples using the library.
- **src**: All .cc source files will be located here.
- **test**: Directory to hold the unit test source files which you will, hopefully, write to test your classes before they are submitted. Note that I left the original tests in place. There is enough code commented out so that `make` will compile a run-able binary to the **bin** directory.

MobileRobot:

Instances of the `MobileRobot` class represent something that can move, without describing how it moves. See the provided header file for the public interface. Behavior is as described in class.

Translation:

Provides a pair of pure virtual methods which your `TrackedTranslation` and `QuadRotorTranslation` classes implement through public extension.

TrackedTranslation:

The `TrackedTranslation` class implements a virtual parent and so must be implement all virtual functions if objects of the class are to be instantiated. You must also implement the `strict::TrackedTranslation` class as discussed in lecture.

QuadRotorTranslation:

The `QuadRotorTranslation` class implements a virtual parent and so we must be mindful to implement all virtual functions if we want to instantiate objects of the class. You must also implemented the `strict::QuadRotorTranslation` class as discussed in lecture.

Submission.

To get credit, you must upload a zipped (not tarred, gzipped, or 7z) archive containing your submission files in the the directory tree provided. Given the difficulty I have seen with so many students unable to successfully create and archive files, you will archive **ONLY** the

05hw/

directory structure provided to you.

Late submissions will be handled as per syllabus.