Noah Hoffman CS 202 Project 6 documentation sheet

Purpose:

The purpose of this project was to be familiar constructors, inheritance, polymorphisms, pointers, references, and operators.

Design:

The design was very easy similar to project 5. All we had to do was write the files for Car.cpp Car.h and Vehicle.cpp and Vehicle.h. The main proj6.cpp was already given to us to test our classes and functions against.

Problems:

This project was much easier than project 4. I had some issues with the operators and had a little troubles with inheritance . Other than that not too bad. Polymorphism is still getting worked on too.

Changes:

Would not change anything works like a charm!!

Observations: FORMAT = (output ---- Explanation)

First thing that runs is the Constructor tests.

Testing Derived Default ctor -- cout
Vehicle: Default-ctor -- runs vehicle constructor
Car: Default-ctor --- runs car constructor

Testing Derived Parametrized ctor -- cout
Vehicle: Parametrized-ctor ---runs vehicle Parametrized constructor
Car: Parametized-ctor ---runs car Parametrized constructor

Testing Derived Copy ctor -- cout
Vehicle: Copy-ctor - runs vehicle copy constructor

Car : Copy-ctor-----runs car copy constructor

Testing Derived Assignment operator -- cout
Car: Assignment -- runs assignment operator

THEN THE POLYMORPHISM TESTS

Testing VIRTUAL Move Function for DERIVED Class Objects --cout
Car: DRIVE to destination, with throttle @ 75 --- runs move function inside car class

Testing Insertion operator<< Overload for BASE Class Objects ---cout
Car: Throttle: 121 @ [39.54, 119.82, 4500] --- runs vehicle serialize function

Then The Polymorphic Base Class Pointer Tests

Testing VIRTUAL Move Function on Base Class Pointers -- cout
Car: DRIVE to destination, with throttle @ 75 --
Car: DRIVE to destination, with throttle @ 75 ----- All these run move function in car for specific car
Car: DRIVE to destination, with throttle @ 75--

Testing Insertion operator<< Overload for Base Class Pointers
Car: Throttle: 75 @ [37.77, 122.42, 52] --
Car: Throttle: 75 @ [37.77, 122.42, 52]----- runs serialize in vehicle call printing values.
Car: Throttle: 75 @ [37.77, 122.42, 52]--

Original OUTPUT:

////////////////////////////////
///// Constructor Tests /////
////////////////////////////////

Testing Derived Default ctor
Vehicle: Default-ctor
Car: Default-ctor

```
Testing Derived Parametrized ctor
Vehicle: Parametrized-ctor
Car: Parametized-ctor

Testing Derived Copy ctor
Vehicle: Copy-ctor
Car : Copy-ctor

Testing Derived Assignment operator
Car: Assignment

//////////////////////////////////
/////   Polymorphism Tests  /////
//////////////////////////////////

Testing VIRTUAL Move Function for DERIVED Class Objects
Car: DRIVE to destination, with throttle @ 75

Testing Insertion operator<< Overload for BASE Class Objects
Car: Throttle: 121 @ [39.54, 119.82, 4500]

////////////////////////////////////////////////////
/////   Polymorphic Base Class Pointer Tests  /////
////////////////////////////////////////////////////

Testing VIRTUAL Move Function on Base Class Pointers
Car: DRIVE to destination, with throttle @ 75
Car: DRIVE to destination, with throttle @ 75
Car: DRIVE to destination, with throttle @ 75

Testing Insertion operator<< Overload for Base Class Pointers
Car: Throttle: 75 @ [37.77, 122.42, 52]
Car: Throttle: 75 @ [37.77, 122.42, 52]
Car: Throttle: 75 @ [37.77, 122.42, 52]

////////////////////////////
/////      Tests Done    /////
////////////////////////////
Car: Dtor
```

Vehicle: Dtor
Car: Dtor
Vehicle: Dtor
Car: Dtor
Vehicle: Dtor