Inherited Members

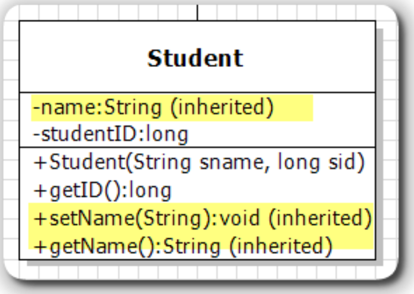
Open `main.cpp` and look at the `main()` function, which creates a `Student` object (steve), and then call some of its member functions. Run the project by typing `make run` in the terminal. You'll see something like this:

```
./inherit
getName()->Stephen
getID()->1007
```

Of course the `Student` object named `steve` can call the `getID()` member function, which was defined in the `Student` class. No surprises there!

However, it can also call the `setName()` and `getName()` member functions, **which were not defined** in `Student`, but in `Person`. More importantly, those member functions can read and change the `name` data member in the `Person` class **as if** `name` were declared inside the `Student` class. Why?

When you create `Student` objects, each derived class object contains **all of the data members and member functions of its base class**. If you were to look at a "logical" diagram of the Student class, it would look something like that shown here.


Student
-name:String (inherited)
-studentID:long
+Student(String sname, long sid)
+getID():long
+setName(String):void (inherited)
+getName():String (inherited)

However, (very important), the data members **will not be directly accessible** to the derived class object, because they were declared `private` in the base class.