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1  #include "Car.h"
2  #include<iostream>
3  int main() {
4      // Lecture 46: Const Member Functions
5      const Car c(5);
6      // if we declare the above car as const, we only
7      • can access methods which do not modify the state
8      • of the object.
9      // These functions below – will all modify the
10     • state of the object, so all these accelerate
11     • calls which modify the speed and fuel will give
12     • errors.
13     //car.Accelerate(); – so all these will result in
14     • errors.
15     //car.Accelerate();
16     //car.Accelerate();
17     // However c.Dashboard does not modify the state
18     • of the object, so we should allow it to be
19     • qualified by const – so that this declaration
20     • will compile.
21     c.Dashboard();
22
23     // in car.cpp, where the c.Dashboard is
24     • implemented, do the following:
25     // add the const at the back of the definition
26     void Car:: Dashboard() const {
27         fuel++; // is under the hood actually
28         • implemented as:
29         this->fuel++;
30         // if we modify the state of the object in a
31         • const qualified function, this-> indicates
32         • the object. The const qualifier that we have
33         • applied to the member function is actually
34         • ALSO applied to this pointer. More
35         • specifically, it is applied to *this,
36         • therefore when we try to modify the value of
37         • a member variable inside this member
38         • function it is not allowed. This also makes
39         • all of its members constant.
40
41         // So the statement
42         std::cout << fuel << std::endl;

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23         std::cout << speed << std::endl;
24     }
25     // in car.h.
26     // add the const at the back of the declaration
27     void Dashboard() const;
28
29
30     return 0;
31 }
32
```