

# Object-oriented Programming in C++

## Practical Worksheet 4

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### Questions

*(Questions marked \* need to be submitted to the NOW dropbox.)*

*(Make a Visual Studio solution file by creating a new Visual Studio project for the first question. Add .cpp files, etc. Add further Visual Studio projects to this solution for each question.)*

### LECTURE 4

29. Write your own `Car` class. The class data should include:

- `make` (using an array of `char`),
- `year`,
- `petrol`,
- `tankSize`,
- `mpg` (miles per gallon),
- `owner` (using an array of `char`).

The functions should include:

- `display`,
- `fillPetrol`: pass number of gallons as a parameter and return gallons actually input (before full),
- `drive`: pass distance as a parameter and return distance actually travelled (stopping if empty),
- `changeOwner` (passing new name as a parameter).

You should also have **two constructors** (one with and one without parameters) and

any other functions needed, such as `full()` and `empty()`. (Should these 2

functions be public or private?)

- Put code in the constructors to show when each is called (`cout << "Constructor X called";`).

- Write a program to create and use a Car object, making sure it calls all the public functions.
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