IB9N7 C++ for Quantitative Finance
Worksheet 13

Small objects

11 February 2016
(Week 19)

Objectives for this lab session

By the end of this session, you should have played with some more objects

Exercises

Exercise 1: Colours

(a) Create an enumeration `Colour` of colours red, green and blue.

(b) Define a function

```
1 void printBlueLovers(const std::tuple<std::string,int,Colour>& people);
```

which takes a list of people's name, age and favourite colour, and prints the name of all those whose favourite colour is blue, in ascending order of age. (Do this by copying data to an appropriate second vector and sorting that.)

(c) Illustrate calling this function.

(d) Modify the function, so that if two people have the same age, their names are printed in alphabetical order.

Exercise 2: array

What are some advantages and disadvantages of `array` over `vector`?

Exercise 3: Yield Curve Bootstrapping

(a) Download and extract 13_YieldCurve.zip, and open the project. This is a simplified Yield Curve Bootstrapper, a procedure for finding approximately realistic discount factors from the market. Have a look around and try to understand how it works. There may be some finance background which you have not seen. Ask for help.

(b) Consider how you would allow the use of the `Curve` object to be used in a class which implemented the `MarketData` interface from the EquityMC project.