Ox Language Tutorial

Chapter contents:

Introduction

This chapter will give a brief overview of the important elements of the Ox language. A more formal description of the Ox syntax is in the syntax chapter.

A more comprehensive tutorial introduction to the Ox language is available as a separate book in PDF format. The accompanying tutorial programs are in the `ox\tutorial` folder. The complete reference is:

- **Doornik, J.A. and Ooms, M. (2006)**. *Introduction to Ox*, London: Timberlake Consultants Press. (ISBN 0-9533394-1-6).

This is the recommended starting-point for learning the Ox language.

The next section will introduce the first Ox program, showing how matrix are used. We shall see that a program always includes header files to define the standard library functions, and that it must have a `main` function, which is where program control starts. We shall also see that the body of the function is enclosed in curly braces.

A first Ox program

Ox is an object-oriented matrix language with a comprehensive mathematical and statistical function library. Matrices can be used directly in expressions, for example to multiply two matrices, or to invert a matrix. The basic syntax elements of Ox are similar to the C, C++ and Java languages (however, knowledge if these languages is not a prerequisite for using Ox). This similarity is most clear in syntax items such as loops, functions, arrays and classes. A major difference is that Ox variables have no explicit type, and that special support for matrices is available.

The advantages of object-oriented programming are that it potentially improves the clarity and maintainability of the code, as well as reducing coding effort through inheritance. Several useful classes are provided with Ox.

As a first example of an Ox program consider the following Ox code:

```
#include <oxstd.oxh> // include Ox standard library header
```