
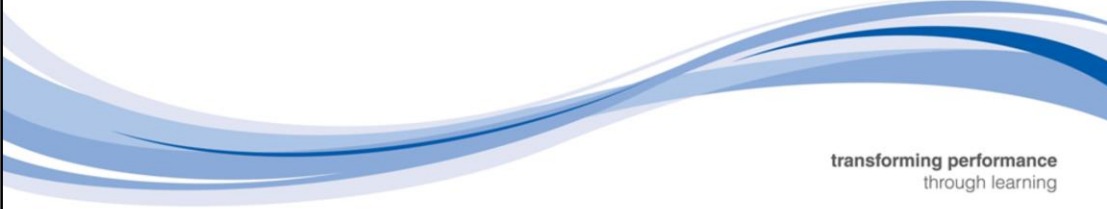


QACADV_v1.0



Advanced C

15 The Way Ahead



transforming performance
through learning

The Way Ahead

- **Objectives**
 - To put the course into perspective
- **Contents**
 - What have we achieved?
 - The impact of C++
 - Further sources of information
 - Support after the course

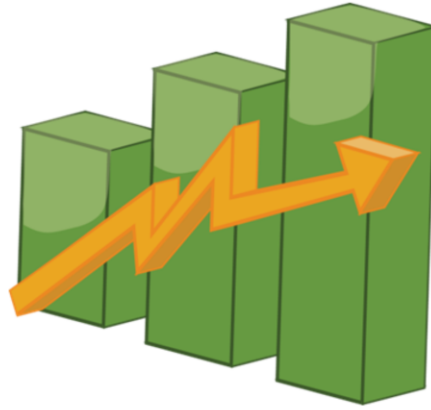


In this brief chapter we shall review our progress during the course and identify the possible future of the C language. We shall also look at channels of support that are available to you after the course.

What have we achieved?

■ In this course we have

- Examined the features of Standard C
- Seen how to make the most of arrays, pointers and structures in C
- Investigated dynamic memory management techniques
- Looked at many useful functions in the standard C library
- Used advanced dynamic data structures including lists and trees

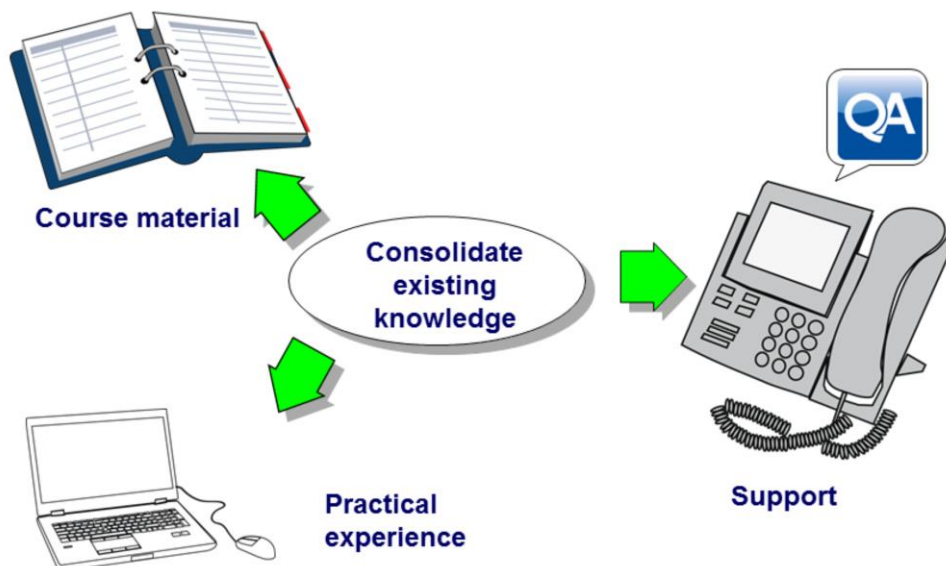


During the course we have studied in some detail the advanced features of the C language, and have investigated a number of sophisticated programming styles and idioms that are not part of the language itself, but which can be achieved nonetheless using existing language elements.

C allows us to construct extremely useful and flexible dynamic data structures, making use of dynamic memory and relying on pointers to connect the various data objects. We have looked at several different techniques and identified the circumstances when one technique is preferable to another.

We have also looked at a variety of standard functions in the C library and you have had the opportunity to consolidate your understanding during the practical sessions at the end of each chapter.

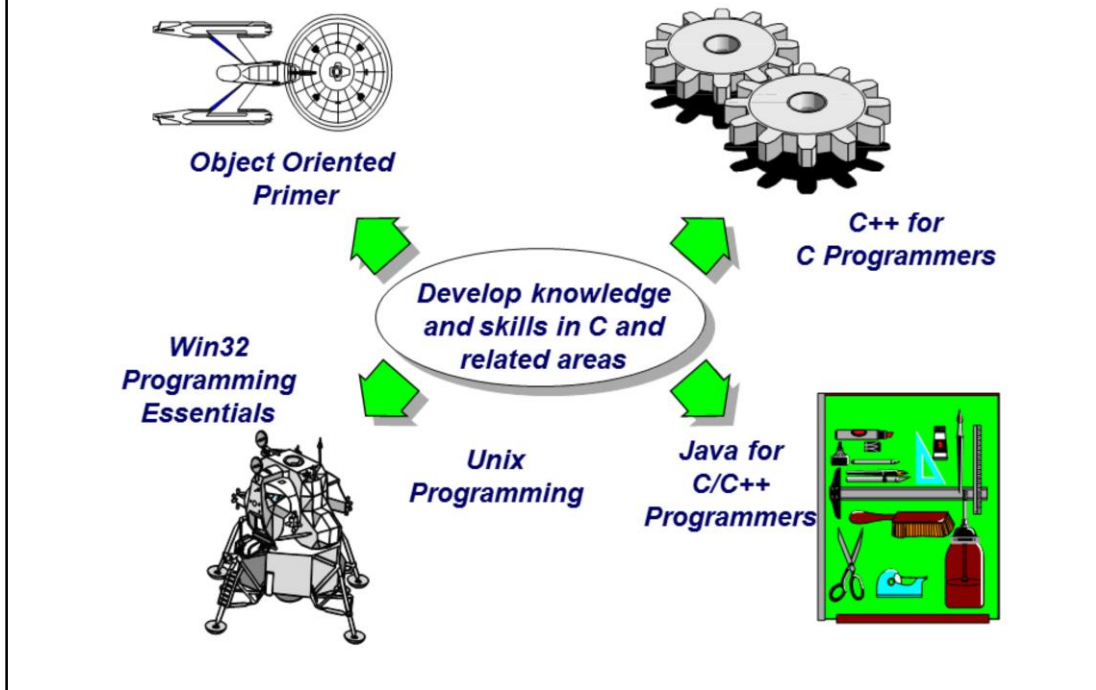
What next?



Attending this course is only the beginning! The course manual can act as a reference for you to refer back to, along with copies of the practicals and solutions that you can take away with you. There is no substitute for practical experience, and you will find that applying what you have learnt will reinforce your knowledge and clarify both language features and techniques.

If you have any problems with C in the future, or indeed with any other related technical subject, you are welcome to contact QA for help and advice. We cannot necessarily guarantee to solve *all* your problems, but we will certainly do our utmost to resolve your difficulties. For more significant undertakings, QA Consulting might be an option for you to consider.

And then?



No language is an island: C is a language that allows you to use enabling technologies to build systems. We have introduced C, but there is more to development in C than has been covered in the course:

Object Oriented Primer

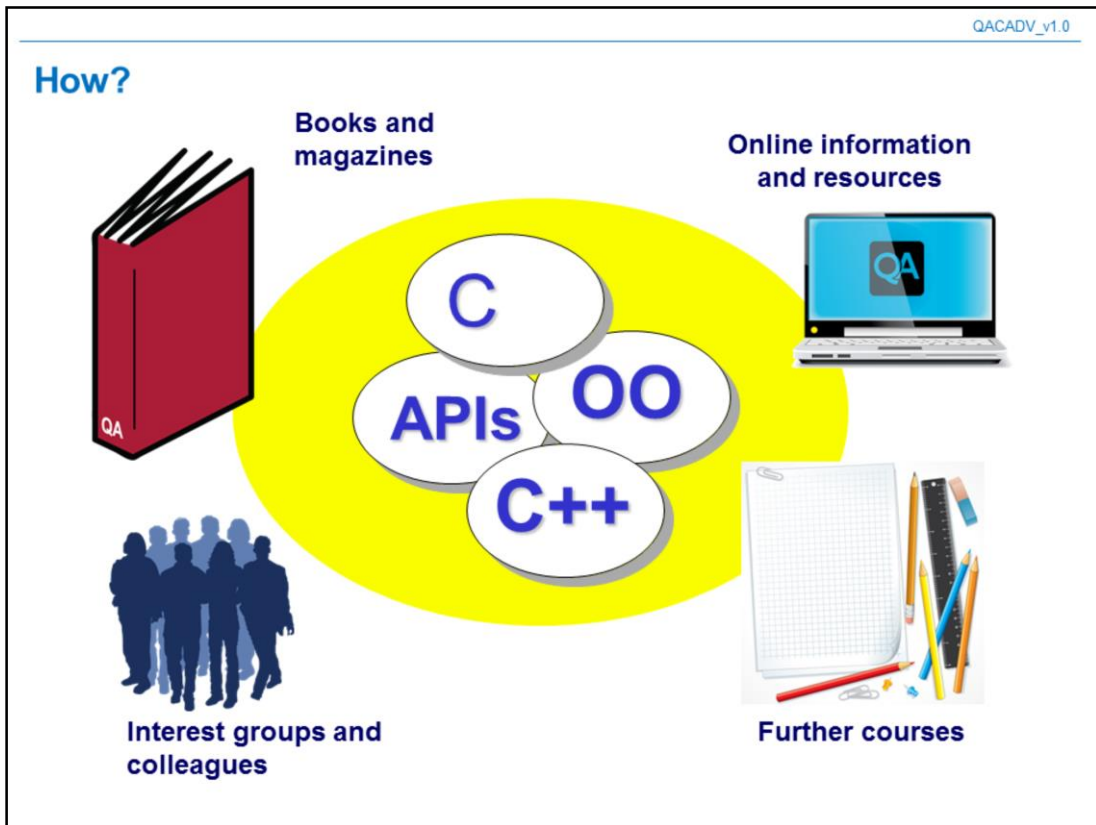
C++ for C Developers

Win32 Programming Essentials

Unix Programming

Java for C/C++ Programmers

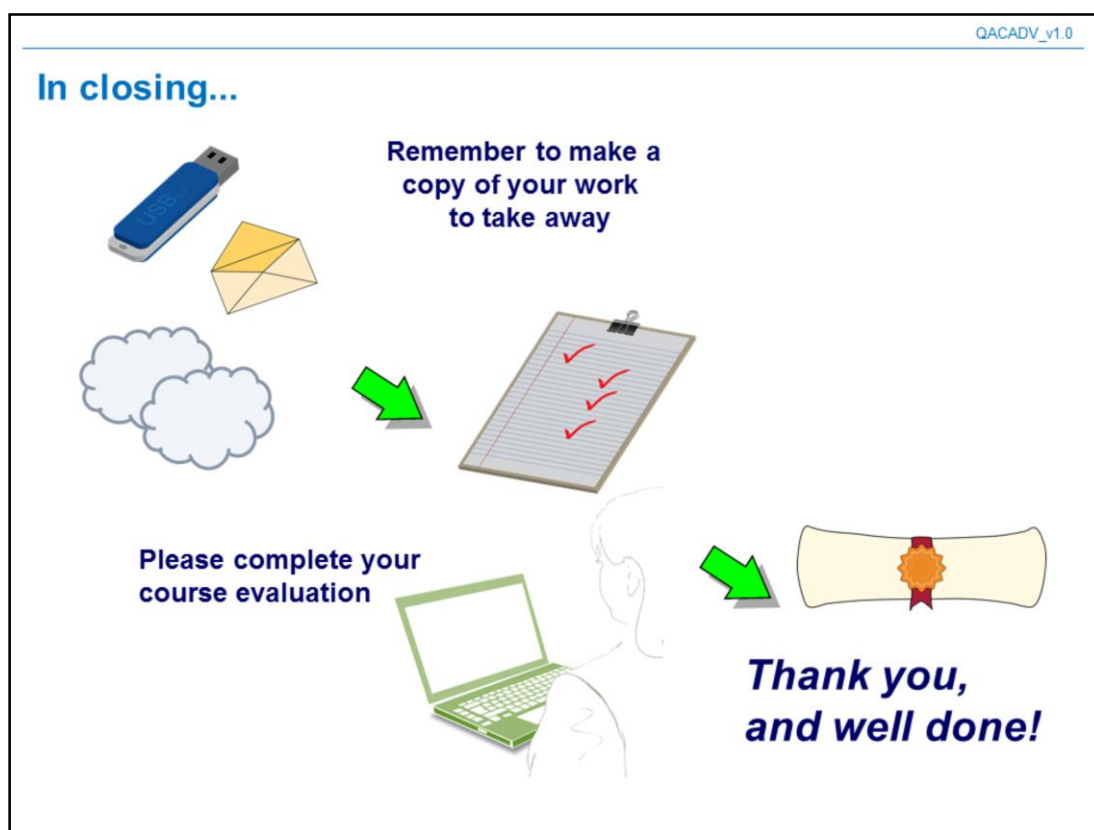
QA provides courses and consultancy in all of the listed areas, and many of the recommended books are listed in the bibliography. If you have any more questions about these, or any area that does not appear to be covered, please contact us.



The most common day to day learning interaction we can have is with our colleagues. No two people have the same experience of software development, and being able to ask someone for their advice and vice-versa is one of the most common informal techniques for sharing knowledge.

Other forums where you can ask questions and exchange knowledge include usenet discussion groups (although some of these have a poor signal to noise ratio!) and user groups. Of particular interest to C developers is ACCU, The Association of C and C++ Users (<http://www.accu.org>). For more general OO development the UML/OMT User Group covers two of the leading analysis and design methods and notations.

Further courses provide an excellent environment for focused learning, providing the opportunity to practically explore a new topic and ask questions related to your current projects.



We hope that you have enjoyed the course and found it interesting, stimulating and useful.

On Microsoft Windows:

To make a disk copy of all your work simply run the following batch file:

```
c:\qacadv\takecode.bat
```

This will create a zip file called `qacadv.zip` on a floppy disk in the A: drive. This zip file will contain your lab work, the original labs (in case you want to do the exercises again from scratch), and the model answers.

You can unzip `qacadv.zip` using `winzip`. Alternatively you can use `pkunzip.exe` which is copied to your floppy disk by `takecode.bat`. If you use `pkunzip.exe` make sure you use the `-d` option to restore the directory/folder structure.

On Linux:

To make a disk copy of all your work simply run the following script:

```
~/takecode
```

This will create a zip file called `qacadv.zip` on a floppy disk. This zip file will contain your lab work, the original labs (in case you want to do the exercises again from scratch), and the model answers.

You can unzip `qacadv.zip` using `unzip`, `gunzip`, or even `winzip`.

