

Table of Contents

<u>C++ Programming HOW-TO</u>	1
Al Dev (Alavoor Vasudevan) alavoor[AT]yahoo.com	1
1. Introduction	1
2. Recommended C++ Compilers	1
3. String Class Varieties	1
4. Download String	1
5. Usage of String class	1
6. String.h file	2
7. The Standard C++ Library string class	2
8. File Class	2
9. Memory Allocation in C++	2
10. Pointers are problems	2
11. Debugging	2
12. IDE's and editors for C++	2
13. C++ Online Textbooks and Docs	2
14. C++ Coding Conventions	2
15. C++ Scripting Languages	2
16. Templates	3
17. STL References	3
18. Threads in C++	3
19. C++ Utilities	3
20. Other Formats of this Document	3
21. Translations To Other Languages	3
22. Copyright	3
23. Appendix A String Program Files	3
1. Introduction	3
1.1 Program in C++ ? C++ vs. Java/PHP	4
1.2 Which one Ada95, C, C++, Java or PHP?	5
1.3 Problems facing the current C++ compilers	6
2. Recommended C++ Compilers	7
2.1 Compilers for MS Windows 2000/NT/95/98/ME/XP	7
2.2 Compilers for UNIX systems and clones	7
3. String Class Varieties	7
3.1 Multiple Inheritance – Sample Custom String class	8
4. Download String	9
4.1 How Can I trust Al Dev's String Class?	9
5. Usage of String class	9
5.1 Operators	10
5.2 Functions	11
5.3 Renaming the String class	11
Case 1: Simple rename	11
Case 2: Resolve conflict	12
6. String.h file	12
6.1 StringBuffer.h	18
6.2 StringTokenizer.h	19
7. The Standard C++ Library string class	20
7.1 string by example	21
7.2 Searching a string	21

Table of Contents

7.3 A string tokenizer	22
8. File Class	24
9. Memory Allocation in C++	24
9.1 C++ Zap (Delete) function	24
9.2 Usage of my_malloc and my_free	26
9.3 Garbage Collector for C++	27
10. Pointers are problems	27
11. Debugging	28
11.1 Debug files	29
12. IDE's and editors for C++	29
12.1 IDE's	29
12.2 Editors	30
12.3 Other resources	30
13. C++ Online Textbooks and Docs	30
13.1 C++ Sites	31
13.2 C++ Tutorials	32
13.3 Useful links	32
13.4 C++ Quick-Reference	32
13.5 C++ Usenet Newsgroups	32
13.6 Java like API	32
14. C++ Coding Conventions	33
15. C++ Scripting Languages	34
15.1 PIKE & PHP (C/C++ Scripting Languages)	34
15.2 SoftIntegration Ch (C/C++ Scripting Language)	35
15.3 PHP (C++ Scripting Language)	35
16. Templates	35
17. STL References	36
17.1 Overview of the STL	37
17.2 Header Files	38
17.3 The Container Classes Interface	38
17.4 Vectors	39
Constructing Vectors	39
Checking Up on Your Vector	40
Accessing Elements of a Vector	41
Inserting and Erasing Vector Elements	42
Vector Iterators	43
Comparing Vectors	45
17.5 Iterators and the STL	45
17.6 Lists	46
17.7 Sets	46
Constructing Sets	46
What are Function Objects?	47
A Printing Utility	49
How Many Elements?	50
Checking the Equality of Sets	51
Adding and Deleting Elements	51
Finding Elements	53
Set Theoretic Operations	54

Table of Contents

17.8 Maps	56
17.9 STL Algorithms	56
18. Threads in C++	56
18.1 Threads Tutorial	57
18.2 Designing a Thread Class in C++	57
Introduction	57
Brief Introduction To Threads	57
Basic Approach	58
The Implementation	58
Using The Thread Class	59
Conclusion	59
19. C++ Utilities	60
19.1 Memory Tools	60
20. Other Formats of this Document	61
20.1 Acrobat PDF format	62
20.2 Convert linuxdoc to Docbook format	62
20.3 Convert to MS WinHelp format	63
20.4 Reading various formats	63
21. Translations To Other Languages	63
22. Copyright	64
23. Appendix A String Program Files	64