



C++

Programming Step-by-Step

Asadullah Shah



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C++ PROGRAMMING: STEP BY STEP

Editors

Asadullah Shah



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CONTENTS

DEDICATION	iii
PREFACE	viii
ACKNOWLEDGEMENT	ix
1. INTRODUCTION	
<i>Asadullah Shah and Assadullah Shaikh</i>	1
2. ARITHMETIC EXPRESSIONS AND DATA TYPES IN C++	
<i>Asadullah Shah and Assadullah Shaikh</i>	5
3. SENDING THE OUTPUT TO A PRINT FILE	
<i>Asadullah Shah and Assadullah Shaikh</i>	11
4. DECISION MAKING: IF-ELSE STATEMENTS AND RELATIONAL OPERATORS	
<i>Asadullah Shah and Assadullah Shaikh</i>	17
5. LOGICAL OPERATORS AND SWITCH STATEMENTS	
<i>Asadullah Shah and Assadullah Shaikh</i>	25
6. REVIEW, SUMMARY & BUILDING SKILL	
<i>Asadullah Shah and Khamran Khowaza</i>	33
7. ITERATIVE STRUCTURES	
<i>Asadullah Shah and Khamran Khowaza</i>	39

8. THE FOR LOOP

Asadullah Shah and Khamran Khowaza 49

9. THE DO-WHILE LOOP

Asadullah Shah and Khamran Khowaza 55

10. REVIEW OF VARIABLES, FORMATTING

Asadullah Shah and Khamran Khowaza 59

11. REVIEW OF ITERATIVE STRUCTURES

Asadullah Shah and Sumbul Khowaza 63

12. POST-TEST AND NESTED LOOPS

Asadullah Shah and Sumbul Khowaza 73

13. FUNCTIONS

Asadullah Shah and Sumbul Khowaza 83

14. CALL-BY-VALUE AND REFERENCE

Asadullah Shah and Sumbul Khowaza 91

15. MORE ON FUNCTIONS

Asadullah Shah and Sumbul Khowaza 99

16. STRUCTURES (STRUCT) AND FILES

Asadullah Shah and Muniba Shaikh 111

17. ARRAYS

Asadullah Shah and Muniba Shaikh 119

18. EXERCISE OF ARRAY

Asadullah Shah and Muniba Shaikh 127

19. READ DATA FROM A FILE	
<i>Asadullah Shah and Muniba Shaikh</i>	137
20. OBJECT ORIENTED PROGRAMMING	
<i>Asadullah Shah and Muniba Shaikh</i>	143
21. SELECTION SORTING	
<i>Asadullah Shah and Syed Ifthar Ali</i>	153
22. BUBBLE SORT ALGORITHM	
<i>Asadullah Shah and Syed Ifthar Ali</i>	161
23. REVIEW OF ARRAYS	
<i>Asadullah Shah and Syed Ifthar Ali</i>	167
24. LINEAR SEARCHING	
<i>Asadullah Shah and Syed Ifthar Ali</i>	179
25. BINARY SEARCH	
<i>Asadullah Shah and Syed Ifthar Ali</i>	189
26. VECTOR CLASS	
<i>Asadullah Shah and Ejaz Ahmed</i>	199
27. POINTERS	
<i>Asadullah Shah and Ejaz Ahmed</i>	203
28. FUNCTION POINTERS	
<i>Asadullah Shah and Ejaz Ahmed</i>	213
29. POLYMORPHISM AND VIRTUAL FUNCTIONS	
<i>Asadullah Shah and Ejaz Ahmed</i>	219

30. C++ REFERENCES	
<i>Asadullah Shah and Ejaz Ahmed</i>	223
31. CONST CORRECTNESS	
<i>Asadullah Shah and Osama Mahfooz</i>	229
32. MORE ON CONST KEYWORDS	
<i>Asadullah Shah and Osama Mahfooz</i>	235
33. GOTO STATEMENT	
<i>Asadullah Shah and Osama Mahfooz</i>	241
34. HANDLING ERRORS IN C++	
<i>Asadullah Shah and Osama Mahfooz</i>	249
35. STATIC: THE MULTIPURPOSE KEYWORD	
<i>Asadullah Shah and Osama Mahfooz</i>	253

27. POINTERS

Asadullah Shah and Ejaz Ahmed

Department of Computer Science, Faculty of Information and
Communication Technology, International Islamic University Malaysia,
Malaysia

Abstract

In this chapter we will study about pointer variable. A pointer only can hold the address of a memory location. This is same as index of a book, that contains the page number at which such a term can be located. Suppose you have a variable called “a” where an integer is stored. A pointer variable of “a” will contain the address of the memory location where the value is actually stored.

27.1 Introduction of pointers

Pointers are executed as address to variables stored at any memory location. The variables in C++ can be of different types, such as integers (int) or floating numbers (float). For example “x” is an integer variable with value 10, and “y” is a float variable having values 10.12.

A variable name in above case “x” or “y” is an alias for a memory address. What if we wanted to know the address of the memory location where the integer variable x that has a value of 10 is stored? We can use the address operator “&” &x to do that.

27.2 Pointer Variable

The pointer variable indirectly references the value whereas the variable x references the value directly. For example, int *pointerx; The “*” is pronounced **dereference**

The pointerx may contain a memory address which references a memory location where an integer is located.