

C

Programing Language For Beginners

Mr. Hemang Desai

```
if (top.  
function calcWidth(  
var wW = 0;  
if (typeof window.innerWidth == 'number')  
wW = window.innerWidth;  
} else if (document.documentElement && docum  
wW = document.documentElement.clientWidth;  
} else if (document.body && document.body.c  
wW = document.body.clientWidth;  
}  
if (sH = document.documentElement.scrollHeight  
var wH = window.innerHeight || document  
var sW = !document.all && (sH > wH)  
('menu', 'wid
```

C

PROGRAMING LANGUAGE FOR BEGINNERS

Mr. Hemang Desai

I/ C principal and Assistant Professor,
BCA Department

Kripa-Drishti Publications, Pune.

Book Title: **C Programing Language for Beginners**

Author By: **Mr. Hemang Desai**

Price: ₹399

1st Edition

ISBN: **978-81-19149-18-6**



Published: **June 2023**

Publisher:



Kripa-Drishti Publications

A/ 503, Poorva Height, SNO 148/1A/1/1A,

Sus Road, Pashan- 411021, Pune,

Maharashtra, India.

Mob: +91-8007068686

Email: editor@kdpublishations.in

Web: <https://www.kdpublishations.in>

© **Copyright Mr. Hemang Desai**

All Rights Reserved. No part of this publication can be stored in any retrieval system or reproduced in any form or by any means without the prior written permission of the publisher. Any person who does any unauthorized act in relation to this publication may be liable to criminal prosecution and civil claims for damages. [The responsibility for the facts stated, conclusions reached, etc., is entirely that of the author. The publisher is not responsible for them, whatsoever.]

PREFACE

The C programming language is a powerful and versatile tool that can be used to create a wide variety of software applications. This book is a comprehensive introduction to C programming, and it covers all of the essential topics that you need to know in order to write effective C programs.

The book is divided into five units. Unit 1 provides an overview of the C programming language, and it introduces the basic concepts of programming, such as variables, data types, and operators. Unit 2 covers input and output, and it introduces the various functions that can be used to read and write data to and from files. Unit 3 discusses decision making, and it covers the various statements that can be used to control the flow of execution of a C program. Unit 4 covers iteration, and it introduces the various loops that can be used to repeat a block of code a specified number of times. Unit 5 covers arrays and pointers, and it discusses how these data structures can be used to store and manipulate data.

The book also includes a number of exercises that are designed to help you practice the concepts that you have learned.

The exercises are graded, and the answers are provided at the back of the book.

I hope that you will find this book to be a useful and informative resource for learning C programming.

Author

Hemang Desai

Abbreviations

- American National Standard Institute (ANSI)
- Central Processing Unit (CPU)
- Instruction Set Architecture (ISA)
- International Standard Organisation (ISO)
- Standard Input/Output Header File (stdio.h)

INDEX

Unit 1: Introduction 1

1.1 Concepts of Programming Language:	1
1.1.1 Introduction of Source Code, Object Code and Executable Code:	3
1.1.2 Algorithm and Flowchart:	5
1.1.3 Concepts of Structured Programming Language:	8
1.2 Concepts of Editor, Interpreter and Compiler:.....	9
1.2.1 Introduction of C Program Body Structure:	11
1.2.2 Character Set, Concepts of Variables and Constants:	12
1.2.3 Identifiers, Literals, Key Words:.....	15
1.2.4 Data Types (Signed and Unsigned) (Numeric: int, Short int, long, float,).....	16

Unit 2: Input/Output Statements and Operators 19

2.1 Input/Output statements:.....	19
2.1.1 Concepts of Header Files (STDIO, CONIO):.....	19
2.2 Input/Output Statements:	22
2.2.1 Input statements: scanf(), getc (), getch(), gets (), getchar()	23
2.2.2 Output Statements: printf (), putc(), puts(), putchar():	24
2.2.3 Type Specifiers (Formatting Strings): %d, %ld, %f, %c, %s, %lf:	26
2.3 Operators:.....	27
2.3.1 Arithmetic Operators:.....	27
2.3.2 Logical Operators:.....	28
2.3.3 Relational Operators:.....	28
2.3.4 Bit-Wise Operators:.....	29

2.3.5 Assignment Operators:.....	29
2.3.6 Ternary Operator / Conditional Operators:	30
2.3.7 Use of sizeof () function:.....	30
2.4 Important Built-in functions:	31
2.4.1 Use of <string.h>: (strlen, strcmp, strcpy, strcat, strev):.....	31
2.4.2 Use of <math.h>: (abs(), floor(), round(), ceil(), sqrt(), exp(), log(), sin(),cos(), tan(), pow() and trunc()).	37

Unit 3: Decision Making statements.....49

3.1 if Statements:	49
3.1.1 Simple if Statements:	50
3.1.2 if...else Statements:	52
3.1.3 if...else if... else Statements:.....	55
3.1.4 Nested if Statement:	57
3.2 Switch...Case Statement:	58
3.2.1 Use of break and default:	60
3.2.2 Difference Between Switch and If Statements:	63

Unit 4: Iterative statements65

4.1 Use of goto statement for iteration:.....	65
4.2 while loop:	68
4.3 do...while loop:	69
4.4 for loop:	71
4.5 Nested while, do...while and for loops:.....	72
4.5.1 Nested While Loop:.....	72
4.5.2 Nested Do While Loop:	74
4.5.3 Nested for Loop:	77
4.6 Jumping Statement: (Break and Continue):.....	80
4.6.1 Break Statement:.....	80
4.6.2 Continue Statement:.....	81

Unit 5: Concepts of Arrays and Pointer.....82

5.1 Concepts of Single-dimensional Array:	82
5.1.1 Numeric Single Dimensional Array:	82
5.1.2 Numeric Single Dimensional Array Operations: ...	86
5.1.3 Character Single Dimensional Array:.....	104

5.2 Pointers:	111
5.2.1 Concepts of Pointers:.....	113
5.2.2 Declaring and Initializing Int, Float, Char and Void Pointers:.....	113
5.2.3 Pointer-to-Single Dimensional Numeric Array: ..	118

ABOUT THE AUTHOR



Mr. Hemang Desai

(I/C principal and Assistant Professor, BCA Department)

Qualification: BCA, M.SC(ICT), Mphil, PGDRM, Ph.D

(I/C principal and Assistant Professor, BCA Department)

Experience: 14 Years

He has 14 years of teaching experience. He has published and presented seven Research papers, Article in National level and International level Journal. He has attended Workshops, Seminars, Conferences and various Faculty development programs.



Kripa-Drishti Publications
A-503 Poorva Heights, Pashan-Sus Road, Near Sai Chowk,
Pune - 411021, Maharashtra, India.
Mob: +91 8007068686
Email: editor@kdpublications.in
Web: <https://www.kdpublications.in>

Price: ₹399

ISBN: 978-81-19149-18-6

