

Problem Solving With C - UE24CS151B

Qualifiers in C

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PSWC Theory Anchor, Feb-May, 2025
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Qualifiers in C



- 1. Introduction
- 2. Size Qualifiers
- 3. Sign Qualifiers
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Qualifiers in C



Introduction

- Keywords which are applied to the data types resulting in Qualified type
- Applied to basic data types to alter or modify its sign or size

- Types of Qualifiers
 - Size Qualifiers
 - Sign Qualifiers
 - Type qualifiers

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Size Qualifiers

- Prefixed to modify the size of a data type allocated to a variable
- Supports two size qualifiers, short and long
- Rules Regarding size qualifier as per ANSI C standard
 - **short int <= int <=long int //** short int may also be abbreviated as short and long int as long. But, there is no abbreviation for long double.
- Coding Examples

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Sign Qualifiers

- Used to specify the signed nature of integer types
- It specifies whether a variable can hold a negative value or not
- Sign qualifiers are used with int and char types
- There are two types of Sign Qualifiers in C. Signed and Unsigned
- A signed qualifier specifies a variable which can hold both positive and negative integers
- An unsigned qualifier specifies a variable with only positive integers
- Coding Examples

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Type Qualifiers

 A way of expressing additional information about a value through the type system and ensuring correctness in the use of the data

- Type Qualifiers consists of two keywords
 - const
 - volatile.

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Type Qualifiers continued..

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const:

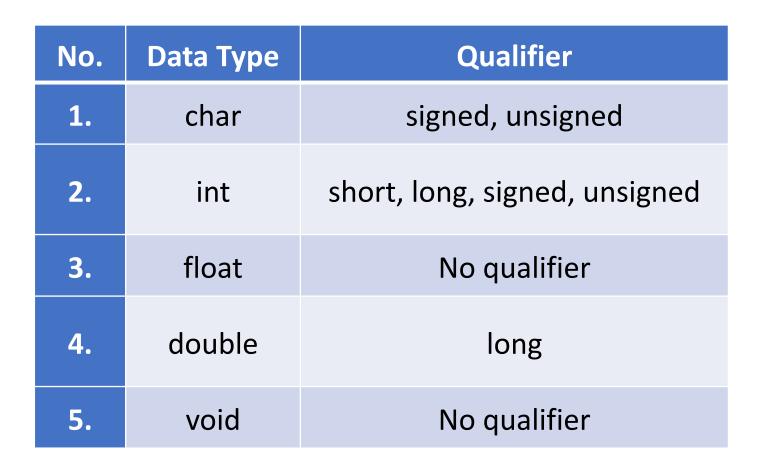
- Once defined, their values cannot be changed.
- Called as literals and their values are fixed.
- Syntax: const data_type variable_name

volatile:

- Intended to prevent the compiler from applying any optimizations
- Their values can be changed by code outside the scope of current code at any time
- Also can be changed by any external device or hardware
- Syntax: volatile data_type variable_name
- Coding Examples

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Applicability of Qualifiers to Basic Types







THANK YOU

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