

★ DATA TYPES ★

classmate

Date _____

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• Fundamental Data types.

1. Integer (int)

Integer or int is 4 bytes

there are different types of int having different ranges

(a) Short int: $-32,768$ to $32,767$ at least 16 bits

(b) long int: $-2,147,483,648$ to $2,147,483,647$ 32 bits

(c) long long int: $-9,223,372,036,854,775,808$ to $9,223,372,036,854,775,807$.
64 Bits

(d) unsigned int or int: 0 to $4,294,967,295$ 4 bits

2. Float Point [float or double]

1. float

It provides a Single Precision floating point numbers

It occupies 4 bytes of memory

2. double

It provides a double precision floating point numbers
& usually occupies 8 bytes

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3. Character (char)

It represents a single character such as a digit, symbol or an alphabet.

The value is stored in ASCII & occupies 1 byte of storage.

4. Boolean (bool)

It represents logical Yes or No & usually occupies 1 byte of storage.

• Data driven Data types

1. Arrays

Arrays are used to store multiple values of some data type in one consecutive memory locations.
 → Array always starts from element 0. i.e. first place is 0.
 it is defined as

data type name [i] = {elements};

eg int numbers [5] = {1, 2, 3, 4, 5}

2. Pointers

they are used to store memory locations

Pointer points to variables like int or string of same type & is created when '*' asterics operator is used.

and the '&' ampersand operator is used to store the memory address of the variable