# CHAPTER - 6

# DATA TYPES AND OPERATIONS

## ★ DATA TYPES

* Data types are used to the nature of data.
* Data types are classified into
  1. Fundamental or built-in data types.
  2. Derived data types.
  3. User defined data types.

### 1. FUNDAMENTAL DATA TYPES

1) int data types (for integer numbers)

* Integers are numbers without fractional part.
* It allocates size of 2 bytes.
* Keyword int is used to declare of variable with integer data type. Eg :- int a,b,c;

2) char data types (for character constants)

* variables with char data type can store letters, digits, special symbols, punctuators etc.
* This data types allocates 1 byte of memory.
* Keyword char is used to declare variable.
* only single characters can be stored in to those type of variables.
* Data items like 'a', '+', '\n', '0'.

  Eg :- char a,b,c;

3) float data types (for floating point numbers)

* Numbers with fractional part is called floating point numbers.
* It allocates 4 bytes of memory.
* Keyword float is used to declare variables.
* Precision of float data type is of 7 digits.
* Eg :- float a,b,c;

4) double data types (for floating point numbers)

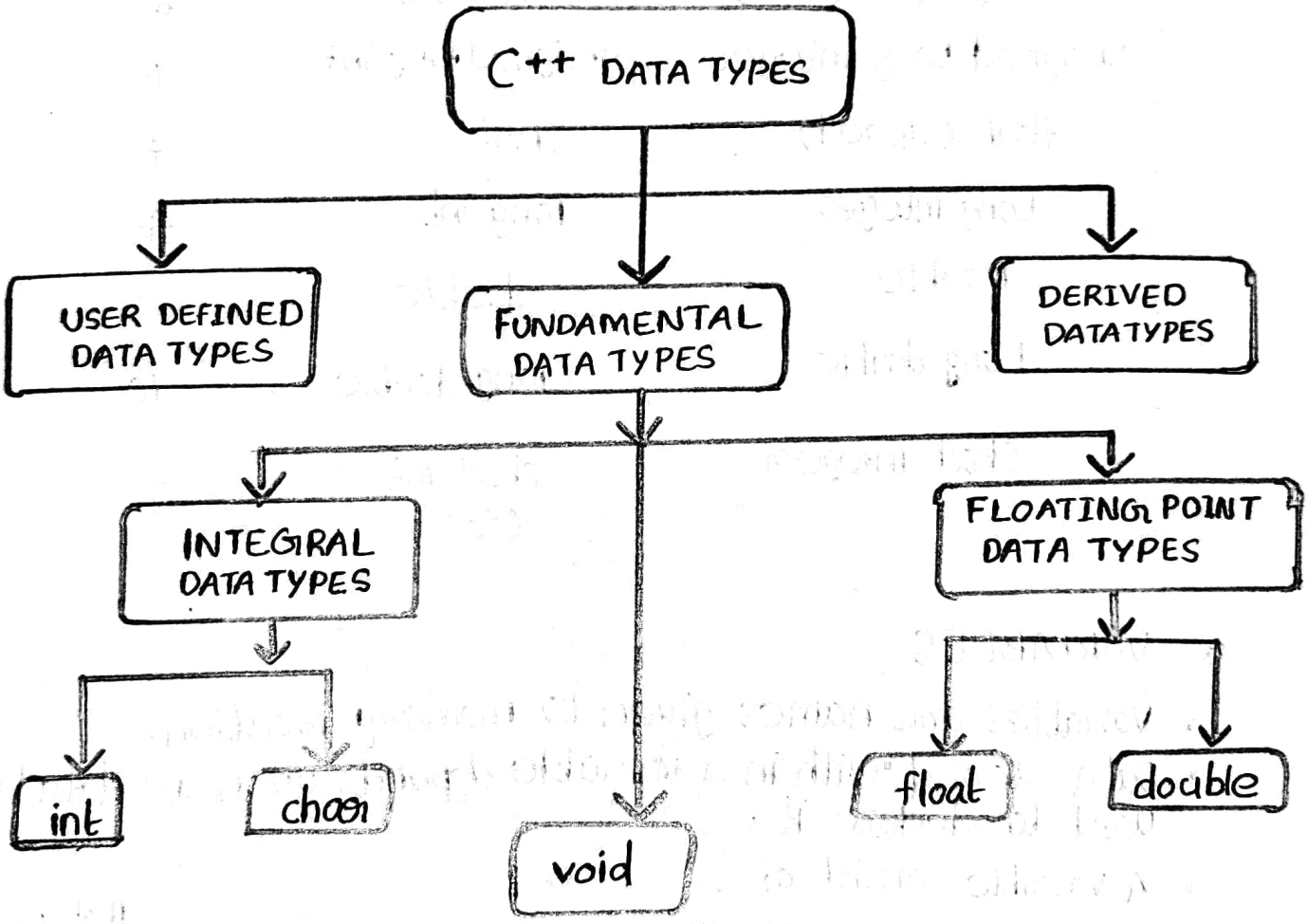
* Used for floating point numbers that requires more precision.
* It allocates 8 bytes of memory.
* The precision of double data type is 15 digits.

  Eg :- double a,b,c;

5) void data types (for null or empty set of values)

* Keyword 'void' is a null data type and it indicates empty set of data.
* It do not require any memory space.

char (1 byte)
int (2 byte)
float (4 byte)
double (8 byte)




## ★ TYPE MODIFIERS

* Data type modifiers allows to alter the size or range or precision.
* Used along with the variable declaration.
* Keywords used are signed, unsigned, long and short.