Data Types in C programming

Data types is simply used to declared variables or the functions. The variable type specifies that how much space it will occupy in the storage and how the bit pattern stored is interpreted. These datatypes have different storage capacities.
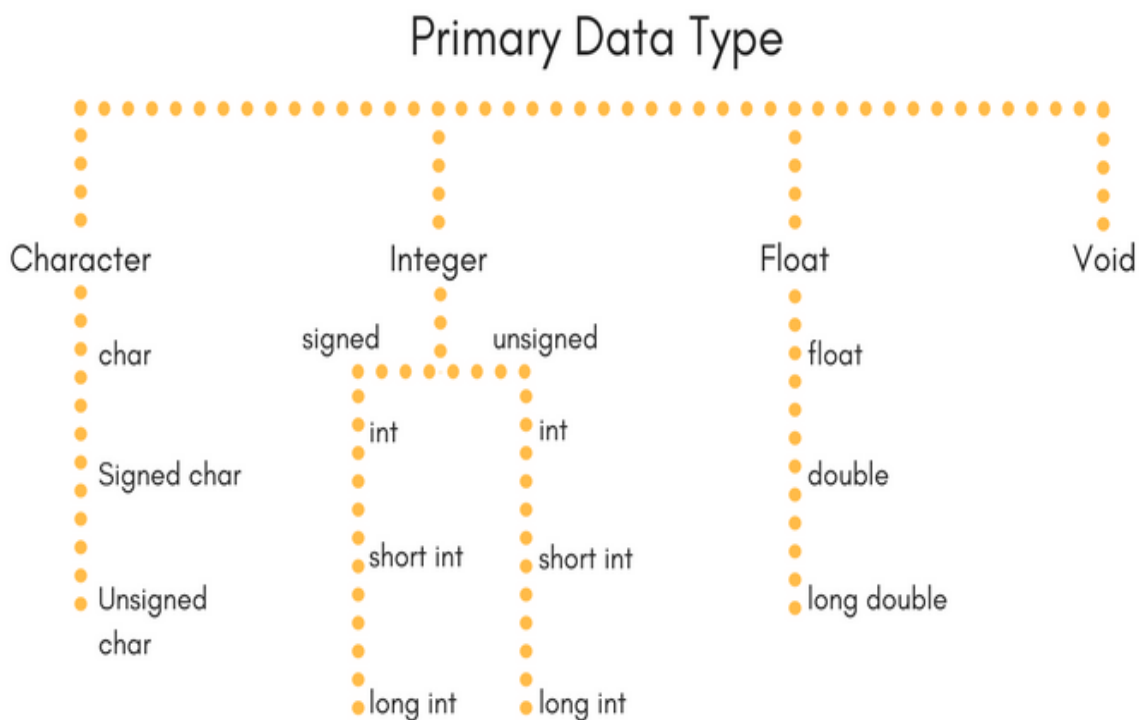
C language supports two different type of data types:

1. Primary data types:

These are fundamental data types in C namely integer(int), floating point(float), character(char) and void.

2. Derived data types:

Derived data types are nothing but primary datatypes but a little twisted or grouped together like array, structure, union and pointer.

Primary Data Type

Character	Integer		Float	Void
char	signed	unsigned	float	
Signed char	int	int	double	
Unsigned char	short int	short int	long double	
	long int	long int		

Integer type

Integers are used to store whole numbers.

Size and range of Integer type on 16-bit machine:

Type	Size(bytes)	Range
int or signed int	2	-32,768 to 32767
unsigned int	2	0 to 65535
short int or signed short int	1	-128 to 127
unsigned short int	1	0 to 255
long int or signed long int	4	-2,147,483,648 to 2,147,483,647
unsigned long int	4	0 to 4,294,967,295

Floating point type

Floating types are used to store real numbers.

Size and range of Integer type on 16-bit machine

Type	Size(bytes)	Range
Float	4	3.4E-38 to 3.4E+38
Double	8	1.7E-308 to 1.7E+308

long double	10	3.4E-4932 to 1.1E+4932

Character type

Character types are used to store characters value.

Size and range of Integer type on 16-bit machine

Type	Size(bytes)	Range
char or signed char	1	-128 to 127
unsigned char	1	0 to 255

Void type

Void type means no value. This is usually used to specify the type of functions which returns nothing. We will get acquainted to this datatype as we start learning more advanced topics in C language, like functions, pointers etc.