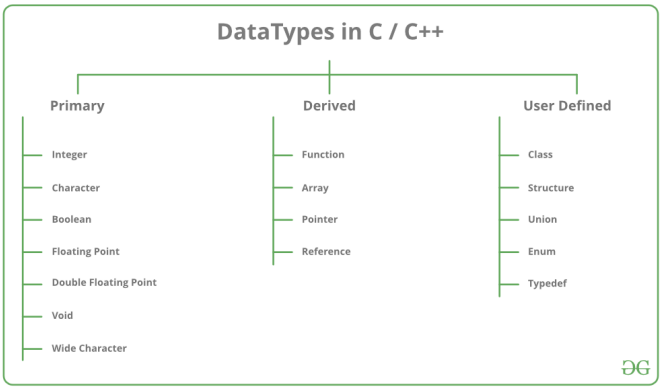
Data Type

- All variables use data type during declaration to restrict the type of data to be stored.
- Data types are used to tell the variables the type of data they can store.
- Whenever a variable is defined in C++, the compiler allocates some memory for that variable based on the data type with which it is declared. *Every data type requires a different amount of memory.*

C++ supports the following data types:

1. Primary or Built-in or Fundamental data type
2. Derived data types
3. User-defined data types



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1. Primitive Data Types:

These data types are built-in or predefined data types and can be used directly by the user to declare variables. example: int, char, float, bool, etc.

- Integer
- Character
- Boolean
- Floating Point
- Double Floating Point

- Valueless or Void
- Wide Character (wide char take up twice the space and can take on much larger values as a result)

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2. Derived Data Types:

Derived data types that are derived from the primitive or built-in datatypes are referred to as Derived Data Types.

- Function
- Array
- Pointer
- Reference

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3. Abstract or User-Defined Data Types:

Abstract or User-Defined data types are defined by the user itself. Like, defining a class in C++ or a structure.

- Class
- Structure
- Union
- Enumeration
- Typedef defined Datatype