**Ranges of Data Types in C++**

Data type modifiers available in C++ are:

* **Signed**
* **Unsigned**
* **Short**
* **Long**

The below table summarizes the modified size and range of built-in datatypes which also depends upon the compiler( i.e 32bits or 64bits ) when combined with the type modifiers:

|  |  |  |
| --- | --- | --- |
| **Data Type** | **Size (in bytes)** | **Range** |
| short int | 2 | -32,768 to 32,767 |
| unsigned short int | 2 | 0 to 65,535 |
| unsigned int | 4 | 0 to 4,294,967,295 |
| int | 2 or 4 | -32,768 to 32,767 or -2,147,483,648 to 2,147,483,647 |
| long int | 4 | -2,147,483,648 to 2,147,483,647 |
| unsigned long int | 4 | 0 to 4,294,967,295 |
| long long int | 8 | -(2^63) to (2^63)-1 |
| unsigned long long int | 8 | 0 to 18,446,744,073,709,551,615 |
| signed char | 1 | -128 to 127 |
| unsigned char | 1 | 0 to 255 |
| float | 4 | -3.4×10^38 to 3.4×10^38 |
| double | 8 | -1.7×10^308 to1.7×10^308 |
| long double | 12 | -1.1×10^4932 to1.1×10^4932 |
| wchar\_t | 2 or 4 | 1 wide character |