

## C++ Primitive Data Types

<i>Name</i>	<i>Size (bytes)</i>	<i>Range of values</i>
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### Boolean

bool		true or false
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### Integer

int	>= 2	-32,768 to 32,767
unsigned int	>= 2	0 to 65,535
long	>= 4	-2,147,483,647 to 2,147,483,647
unsigned long	>= 4	0 to 4,294,967,295
long long	>= 8	$-(2^{63})$ to $(2^{63}) - 1$
unsigned long long	>= 8	0 to $(2^{64}) - 1$

### Floating point

float	>= 4	+/- 3.4e +/- 38 (~7 digits)
double	>= 8	+/- 1.7e +/- 308 (~15 digits)

*You should use double by default; float can often be too small.*

### Character

char	>= 1	any ASCII character
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Note: single characters use single quotes, e.g.,  
char c = 'A';

Only strings (which aren't primitives anyway) use double quotes, e.g.,  
string s = "I love CS 142!";

### No data type

void		no possible values
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### Object Data Types

string

Usage:

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string s = "A double quoted string";
```

Single quotes in C++ are only for characters.