

Rule for Naming Variables

1	Must be one word (No spaces)
2	No Special Characters (can include only underscore)
3	Cannot begin with a number
4	Must be meaningful

Valid	Invalid
amount_paid	amount paid
phone2	2phone
OverTime	\$phone
CoUnT	

C++ Data Types

Name	Description	Size*	Range*
char	Character or small integer.	1byte	signed: -128 to 127 unsigned: 0 to 255
short int (short)	Short Integer.	2bytes	signed: -32768 to 32767 unsigned: 0 to 65535
int	Integer.	4bytes	signed: -2147483648 to 2147483647 unsigned: 0 to 4294967295
bool	Boolean value. It can take one of two values: true or false.	1byte	true or false
float	Floating point number.	4bytes	+/- 3.4e +/- 38 (~7 digits)
double	Double precision floating point number.	8bytes	+/- 1.7e +/- 308 (~15 digits)

Variable Declaration

Data Type Variable semicolon(;) or Data Type Multiple Variables separate by a comma semicolon(;)

`char code;` or `char code, status, switch;`

Data Type Variable semicolon(;) or Data Type Multiple Variables separate by a comma semicolon(;)

`int age;` or `int age, count, size, cnt;`

Data Type Variable semicolon(;) or Data Type Multiple Variables separate by a comma semicolon(;)

`float amount;` or `float amount, price;`

Assignment Statement

Always on left side of equal sign

Computed and assigned to the left

Ending with a semicolon(;

Variable Name = Expression or Constant;

The diagram shows the general form of an assignment statement: "Variable Name = Expression or Constant;". Three red annotations with blue arrows point to parts of the statement: "Always on left side of equal sign" points to the "Variable Name", "Computed and assigned to the left" points to the "Expression or Constant", and "Ending with a semicolon(;" points to the semicolon at the end.

Variable

Expression

semicolon(;

Ex: area = length * width;

The example "Ex: area = length * width;" is annotated with three red labels and blue arrows: "Variable" points to "area", "Expression" points to "length * width", and "semicolon(;" points to the semicolon at the end.

Or

Variable

Constant

semicolon(;

area = 30;

The example "area = 30;" is annotated with three red labels and blue arrows: "Variable" points to "area", "Constant" points to "30", and "semicolon(;" points to the semicolon at the end.

Data Type Conflict

Variables of character datatypes cannot be assigned to numeric datatypes and vice versa.

* * * * *

Given: char code;
 int age;
 float amount;

Valid Statements:

amount = age;
age = amount;

Invalid statements:

code = age;
amount = code;
age = code;