short int --> 2 bytes (16 bits)

int --> 4 bytes (32 bits)

long long int --> 8 bytes (64 bits)

float --> 4 bytes (32 bits)

double --> 8 bytes (64 bits)

char --> 1 bytes (8 bits)

Literals are the integers, floating point numbers or expressions which are not stored in any variable.

For Example:

cout << 45;

In this example 45 is a literal as it is not stored in any variable.

If the literal represents an integer value ie (45 , 78 , 99) the default datatype of the literal will be int.

If the literal represents an floating point value ie (45.8 , 78.54 , 99.374) the default datatype of the literal will be double.

Constant Identifier → Can't be changed.

Non - Constant Identifier → Can be changed.

L Value → can be placed on left side of the assignment operator (=)

R Value → can't be placed on left side of the assignment operator (=)

Formula for random number using rand():

lowest number + rand() % (highest number – lowest number).

Type Casting:

We can change the data type of the variables explicitly for example the variable has a data type of integer we can convert in into float by type casting.

Int x = 30;

(float)x → It converts the data type into float but the original data type of x will remain int. It will only change its data type only at this line or for this expression.

Conversion:

034 --> for displaying octal number system.

or

cout << oct << 45; → For this use #include<iomanip>

0x347 --> for displaying hexa decimal number system.

0b00101 --> for displaying binary number system.

or

cout << bin << 45; → For this use #include<iomanip>