The Standard Function Library

The standard function library is divided into the following categories −

* I/O,
* String and character handling,
* Mathematical,
* Time, date, and localization,
* Dynamic allocation,
* Miscellaneous,
* Wide-character functions,

The Object Oriented Class Library

Standard C++ Object Oriented Library defines an extensive set of classes that provide support for a number of common activities, including I/O, strings, and numeric processing. This library includes the following −

* The Standard C++ I/O Classes
* The String Class
* The Numeric Classes
* The STL Container Classes
* The STL Algorithms
* The STL Function Objects
* The STL Iterators
* The STL Allocators
* The Localization library
* Exception Handling Classes
* Miscellaneous Support Library

\_\_builtin\_popcount(x) to count number of ones In the number

It is also possible to modify single bits of numbers using similar ideas. The formula x | (1 << k) sets the kth bit of x to one, the formula x & ~(1 << k) sets the kth bit of x to zero, and the formula x ˆ (1 << k) inverts the kth bit of x. Then, the formula x & (x − 1) sets the last one bit of x to zero, and the formula x & −x sets all the one bits to zer