**Generate random number**

The rand() function returns a pseudo-random integral number in the range between 0 and [RAND\_MAX](http://www.cplusplus.com/RAND_MAX).  
  
This number is generated by an algorithm that returns a sequence of apparently non-related numbers each time it is called. This algorithm uses a seed to generate the series, which should be initialized to some distinctive value using function [srand](http://www.cplusplus.com/srand).  
  
[RAND\_MAX](http://www.cplusplus.com/RAND_MAX) is a constant defined in [<cstdlib>](http://www.cplusplus.com/cstdlib).  
  
A typical way to generate trivial pseudo-random numbers in a determined range using rand is to use the modulo of the returned value by the range span and add the initial value of the range:

|  |  |  |
| --- | --- | --- |
| 1 2 3 | v1 = rand() % 100; // v1 in the range 0 to 99  v2 = rand() % 100 + 1; // v2 in the range 1 to 100  v3 = rand() % 30 + 1985; // v3 in the range 1985-2014 |  |

Notice though that this modulo operation does not generate uniformly distributed random numbers in the span (since in most cases this operation makes lower numbers slightly more likely).  
  
C++ supports a wide range of powerful tools to generate random and pseudo-random numbers (see [<random>](http://www.cplusplus.com/random) for more info).