**How to generate random numbers?**

The steps to compute random numbers using the **srand** and **rand** C++ built-in functions:

* 1. A **seed** value is required for initializing the random number generator. This seed value must be unique each time the program is. The best way to generate the seed value is to use some variation of **time**. Using the following statement:

unsigned int no\_secs;

no\_secs = time(0);

will return the number of seconds that have elapsed since midnight, Jan 1, 1970. Note that *no\_secs* will be different each time the program is run, thus providing the perfect seed value. Use the **srand** function for initializing the seed as follows:

srand(no\_secs);

You will need to include the ctime library to access the time function.

#include <ctime>

* 1. A random number can be generated as follows:

unsigned int rand\_number;

rand\_number = rand();

The random number generated above will be between 0 and 32767. We want one that is between 0 and (*no\_possibilites* – 1). So we use the modulo operator (%) to normalize the original random number as follows:

rand\_number = rand\_number %no\_possibilities;