```
/* Hash function on strings
 * 15-122 Principles of Imperative Computation, Spring 2011
 * Frank Pfenning
 */

#use <rand>
#use <string>
                                            Size of the table.
int hash_string(string s, int limit)
//@requires limit > 1;
//@ensures 0 <= \result && \result < limit;
{
  int a = 1664525; int b = 1013904223; /* inlined random number generator */
  int r = 0x1337beef;                          /* initial seed */
  int len = string_length(s);
  int h = 0;                                   /* empty string maps to 0 */
  for (int i = 0; i < len; i++)
    //@loop_invariant 0 <= i;
    {
      char c = string_charat(s, i);
      int cv = char_ord(c);
      h = r*h + cv; /* mod 2^32 */
      r = r*a + b;  /* mod 2^32, linear congruential random no */
    }

  /* reduce to range */
  h = h % limit;

  //@assert -limit < h && h < limit;
  if (h < 0) h = h + limit;
  return h;
}
```

You could (or perhaps should)
offload this work to the library
code in a different implementation.