(03/13/13)

Laboratory Exercise 7

Consider unsigned integers as keys. We will do LSD radix sort with r bits for each run. That means radix is 2^r. Since this is from LSD, we need to use a stable sorting algorithm for each run. We use the Counting Sort for that. Implement corresponding procedures properly. Check at least with r = 4, 8, and 16.

On Mulan, the driver C++ program as an object file, driver7.o and the header file, lab7.h, that contains prototypes, are available in ~gdseki/CS115. Your procedures have to be put in file lab7.cc.

The description of usage is as follows:

```
//  Driver program for Lab 7.
//
//    Options:
//  -test       Evaluate performance.
//  -rand       Use rand() to assign key values.
//  -order      Generate sequentially ascending keys.
//  -reverse    Generate sequentially descending keys.
//  -n <size>   Size of the array.
//  -r <radix>  Number of bits of the radix (e.g. -r 16).
//  -q          Do not print the array contents.
//  -v          Always print the array contents.
//  -help       Print this help and exit.
//
```

If you cannot finish your required work, show what you have done so far. If you don't have sample runs, it is automatic Redo.

Send your .cc file and
sample runs in a rtf (rich text file) with the name,
<your last name>_Lab<Lab number> like Seki_Lab3.rtf
to CSciCourse2@gmail.com

with the title,

115Lab<Lab number><your last name>.<your first name> like
115Lab1Seki.Shigeko .

You may want to use a script file to create your .rtf file.

DUE : 03/17/13 (Sun)