BUBBLE SORT

This program uses the string comparison operator " < = " that orders strings according to the ATASCII values of the various characters. Since ATARI BASIC does not have arrays of strings, all the strings used in this program are actually substrings of one large string. A bubble sort, though relatively slow if there are a lot of items to be stored, is easy to write, fairly short, and simpler to understand than more complex sorts.

```
10 DIM B$(1)
20 GRAPHICS 0:? :? "STRING SORT":?
30 TRAP 30:? :? "ENTER MAXIMUM STRING
LENGTH":INPUT SLEN:SLEN1=SLEN-1
40 IF SLEN<1 OR INT(SLEN)<>SLEN THEN ?
 "PLEASE ENTER A POSITIVE INTEGER >0":
GOTO 30
50 TRAP 50:? :? "ENTER MAXIMUM NUMBER
OF ENTRIES"
60 ? "(ENTRIES THAT ARE SHORTER THAN T
HE MAXIMUM ARE PADDED WITH BLANKS)"
70 INPUT ENTRIES
80 IF ENTRIES<2 OR INT(ENTRIES)<>ENTRI
ES THEN ? "PLEASE ENTER A POSITIVE INT
EGER >1":GOTO 50
90 TRAP 40000
100 DIM A$(SLEN*ENTRIES),TEMP$(SLEN)
110 ? :? "ENTER STRINGS ONE AT A TIME"
120 ? "ENTER EMPTY STRING WHEN DONE (J
UST HIT RETURN)"
130 ? :? "PLEASE STAND BY WHILE THE ST
RINGS ARE BEING CLEARED..."
140 FOR I=1 TO SLEN*ENTRIES:A$(I,I)="
":NEXT I
150 ? :?
160 I=1
170 FOR J=1 TO ENTRIES
180 ? "#";J;" ";:INPUT TEMP$
190 IF LEN(TEMP$)=0 THEN ENTRIES=J-1:G
OTO 230
200 A$(I,I+SLEN1)=TEMP$
210 I=I+SLEN
220 NEXT J
230 ? :? :? "PLEASE STAND BY WHILE THE
 STRINGS ARE BEING SORTED..."
240 GOSUB 400:REM CALL SORT ROUTINE
250 ? :?
```