**­­­­­­­­Selection Sort Output**

Data items in given original order:

22 92 18 42 4 68 87 35 13 49 72 7 29 39 51

Please enter your choice (1 - 4, or 5 to quit)

for simple sort routine to run.

\*\*\* Enter 1 to run bubble sort.

\*\*\* Enter 2 to run insertion sort.

\*\*\* Enter 3 to run selection sort.

\*\*\* Enter 4 to run shell sort.

your choice: 3

Select sort -- i: 14, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 14, j: 1, large: 22, x[j]: 92, inner loop \*\*

select sort -- i: 14, indx: 1, x[i]:51, x[indx]: 92, large: 92, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 51 18 42 4 68 87 35 13 49 72 7 29 39 92

Select sort -- i: 13, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 13, j: 1, large: 22, x[j]: 51, inner loop \*\*

select sort -- i: 13, j: 5, large: 51, x[j]: 68, inner loop \*\*

select sort -- i: 13, j: 6, large: 68, x[j]: 87, inner loop \*\*

select sort -- i: 13, indx: 6, x[i]:39, x[indx]: 87, large: 87, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 51 18 42 4 68 39 35 13 49 72 7 29 87 92

Select sort -- i: 12, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 12, j: 1, large: 22, x[j]: 51, inner loop \*\*

select sort -- i: 12, j: 5, large: 51, x[j]: 68, inner loop \*\*

select sort -- i: 12, j: 10, large: 68, x[j]: 72, inner loop \*\*

select sort -- i: 12, indx: 10, x[i]:29, x[indx]: 72, large: 72, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 51 18 42 4 68 39 35 13 49 29 7 72 87 92

Select sort -- i: 11, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 11, j: 1, large: 22, x[j]: 51, inner loop \*\*

select sort -- i: 11, j: 5, large: 51, x[j]: 68, inner loop \*\*

select sort -- i: 11, indx: 5, x[i]:7, x[indx]: 68, large: 68, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 51 18 42 4 7 39 35 13 49 29 68 72 87 92

Select sort -- i: 10, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 10, j: 1, large: 22, x[j]: 51, inner loop \*\*

select sort -- i: 10, indx: 1, x[i]:29, x[indx]: 51, large: 51, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 29 18 42 4 7 39 35 13 49 51 68 72 87 92

Select sort -- i: 9, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 9, j: 1, large: 22, x[j]: 29, inner loop \*\*

select sort -- i: 9, j: 3, large: 29, x[j]: 42, inner loop \*\*

select sort -- i: 9, j: 9, large: 42, x[j]: 49, inner loop \*\*

select sort -- i: 9, indx: 9, x[i]:49, x[indx]: 49, large: 49, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 29 18 42 4 7 39 35 13 49 51 68 72 87 92

Select sort -- i: 8, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 8, j: 1, large: 22, x[j]: 29, inner loop \*\*

select sort -- i: 8, j: 3, large: 29, x[j]: 42, inner loop \*\*

select sort -- i: 8, indx: 3, x[i]:13, x[indx]: 42, large: 42, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 29 18 13 4 7 39 35 42 49 51 68 72 87 92

Select sort -- i: 7, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 7, j: 1, large: 22, x[j]: 29, inner loop \*\*

select sort -- i: 7, j: 6, large: 29, x[j]: 39, inner loop \*\*

select sort -- i: 7, indx: 6, x[i]:35, x[indx]: 39, large: 39, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 29 18 13 4 7 35 39 42 49 51 68 72 87 92

Select sort -- i: 6, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 6, j: 1, large: 22, x[j]: 29, inner loop \*\*

select sort -- i: 6, j: 6, large: 29, x[j]: 35, inner loop \*\*

select sort -- i: 6, indx: 6, x[i]:35, x[indx]: 35, large: 35, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 29 18 13 4 7 35 39 42 49 51 68 72 87 92

Select sort -- i: 5, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 5, j: 1, large: 22, x[j]: 29, inner loop \*\*

select sort -- i: 5, indx: 1, x[i]:7, x[indx]: 29, large: 29, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

22 7 18 13 4 29 35 39 42 49 51 68 72 87 92

Select sort -- i: 4, large: 22, indx: 0, outer loop. \*\*\*

select sort -- i: 4, indx: 0, x[i]:4, x[indx]: 22, large: 22, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

4 7 18 13 22 29 35 39 42 49 51 68 72 87 92

Select sort -- i: 3, large: 4, indx: 0, outer loop. \*\*\*

select sort -- i: 3, j: 1, large: 4, x[j]: 7, inner loop \*\*

select sort -- i: 3, j: 2, large: 7, x[j]: 18, inner loop \*\*

select sort -- i: 3, indx: 2, x[i]:13, x[indx]: 18, large: 18, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

4 7 13 18 22 29 35 39 42 49 51 68 72 87 92

Select sort -- i: 2, large: 4, indx: 0, outer loop. \*\*\*

select sort -- i: 2, j: 1, large: 4, x[j]: 7, inner loop \*\*

select sort -- i: 2, j: 2, large: 7, x[j]: 13, inner loop \*\*

select sort -- i: 2, indx: 2, x[i]:13, x[indx]: 13, large: 13, after inner loop. \*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

4 7 13 18 22 29 35 39 42 49 51 68 72 87 92

Select sort -- i: 1, large: 4, indx: 0, outer loop. \*\*\*

select sort -- i: 1, j: 1, large: 4, x[j]: 7, inner loop \*\*

select sort -- i: 1, indx: 1, x[i]:7, x[indx]: 7, large: 7, after inner loop.\*\*

select sort -- Before the end of outer loop: \*\*\*\*\*\*\*

4 7 13 18 22 29 35 39 42 49 51 68 72 87 92

Selection sort finished \*\*\*\*\*\*\*\*

Data in ascending order

4 7 13 18 22 29 35 39 42 49 51 68 72 87 92