Solution to Exercises in L#24

A Complete Bubble Sort Program (Slide 15)

```
#include "stdio.h"
#define ARRAY_SIZE 6

void bubbleSort(int list[], int last);

void main(void)
{
int myarray[ARRAY_SIZE];
int i = 0;

printf("Please input the array
elements:\n");
for (i = 0; i < ARRAY_SIZE; i++)
{
  scanf_s("%d", &myarray[i]);
}

bubbleSort(myarray, ARRAY_SIZE - 1);

printf("The array elements after sorting
are:\n");
for (i = 0; i < ARRAY_SIZE; i++)
{
  printf("myarray[%d] is %d:\n", i,
myarray[i]);
}
}
```

```
void bubbleSort(int list[], int last)
{
int current, walker, temp;
for (current = 0; current < last; current++)
  for (walker = last; walker > current; walker--)
     if (list[walker] < list[walker - 1])
     {
       temp = list[walker];
       list[walker] = list[walker - 1];
       list[walker - 1] = temp;
     }
}
```

A Complete Selection Sort Program (Slides 20, 21)

```
#include "stdio.h"
#define ARRAY_SIZE  6

void selectionSort(int list[], int last);

void main(void)
{
int myarray[ARRAY_SIZE];
int i = 0;

printf("Please input the array
elements:\n");
for (i = 0; i < ARRAY_SIZE; i++)
{
scanf_s("%d", &myarray[i]);
}

selectionSort(myarray, ARRAY_SIZE - 1);

printf("The array elements after sorting
are:\n");
for (i = 0; i < ARRAY_SIZE; i++)
{
printf("myarray[%d] is %d:\n", i,
myarray[i]);
}
}
```

```
 void selectionSort(int list[], int last)
{
  int current, walker, temp, min;
  for (current = 0; current < last; current++)
  {
     min = current;
     for (walker = current + 1; walker <= last;
walker++)
     if (list[walker] < list[min])
                min = walker;
     /*smallest selected: exchange with current
element*/
     temp = list[current];
     list[current] = list[min];
     list[min] = temp;
   }
}
```