

STUDENT ACTIVITY 3.3 KEY: SORTING PRACTICE

MTA Course: Software Development Fundamentals

Topic: Understand algorithms and data structures

File name: SoftDevFund_SA_3.3_Key

Lesson Objective:

3.3: Understand algorithms and data structures.

Resources, software, and additional files needed for this lesson:

- SoftDevFund_RL_3.3
- SoftDevFund_PPT_3.3
- SoftDevFund_SA_3.3
- SoftDevFund_SA_3.3_key

Directions to the student:

Practice sorting the data sets below using the sorting algorithms identified. Remember that the following sorts are implemented using nested *for* loops. Write the resulting sequence of integers for each value of the outer-loop control variable after the inner loop has been completed.

Content:

1. Bubble Sort

<i>outer</i>	84	50	62	82	83	15
0	50	62	82	83	15	84
1	50	62	82	15	83	84
2	50	62	15	82	83	84
3	50	15	62	82	83	84
4	15	50	62	82	83	84

2. Selection Sort

<i>outer</i>	20	2	10	34	83	29
0	2	20	10	34	83	29
1	2	10	20	34	83	29
2	2	10	20	34	83	29
3	2	10	20	29	83	34
4	2	10	20	29	34	83

3. Insertion Sort.

<i>outer</i>	83	95	44	37	38	72
1	83	95	44	37	38	72
2	44	83	95	37	38	72
3	37	44	83	95	38	72
4	37	38	44	83	95	72
5	37	38	44	72	83	95