

Lesson 7

Lesson 8

Lesson 9

Lesson 10

Lesson 11

Lesson 12

Principles

Define the sorting problem: arranging a list of items in a specific order.

Explain the significance of sorting, in relation to searching.

Describe how bubble sort is used for ordering a list of items.

Describe how insertion sort is used for ordering a list of items.

Describe how merge sort is used for ordering a list of items.

Interpret algorithms and suggest improvements.

Application

Traverse a list of items, swapping the items that are out of order.

Perform a bubble sort to order a list containing sample data.

Insert an item into an ordered list of items.

Perform an insertion sort to order a list containing sample data.

Interpret and analyse code for bubble sort and insertion sort.

Trace code for bubble sort and insertion sort with input data.

Identify factors that could influence the efficiency of a bubble sort implementation.

Merge two ordered lists of items into a new ordered list.

Perform a merge sort to order a list containing sample data.

Analyse and fix errors in a flowchart.

Perform searching and sorting algorithms on samples of data.

Develop a linear search function in Python.

Key:

Concept

Skill

Links:

Direct prerequisite

Scaffolding not direct prerequisite

