

## Exercises – Algorithms

---

1. The following plain English describes an algorithm:

**IF** the list is empty **RETURN** null

**WHILE** the list is not sorted **DO**

**FOR EACH** consecutive pair of elements **IN** the list

**IF** the elements in the pair are not in the correct order **THEN**

            Reverse the order of the pair of elements in the list

- a. What does the algorithm do?
  - b. Write the Pseudo code for the algorithm
  - c. Write the C++ code to implement the algorithm
2. In plain English write out the algorithm noughts and crosses. You can assume the game is for two player but it should check the moves are valid and return when a winning line is detected. Make use of functions to keep your algorithm readable.
  3. Write the pseudocode for the noughts and crosses algorithm you developed above.