

Sorting Algorithms

Sort A

1. Place the cards in a row face down.
2. Turn over first two face down cards and compare. Keep the smaller card face up, and turn the other one back over.
3. Turn over the next card and compare to the face up card. Leave the smaller card face up and turn the larger card face down. Continue to the end of the row until you reach the end. The minimum of the unsorted cards is facing up.
4. Swap the minimum card with the first face down card. Leave the minimum card face up.
5. Repeat procedure from step 2 through 4 until all cards are in face up. The cards are now in order.

Shuffle cards before trying the next sorting algorithm!

Sort B

1. Start with cards face down in a pile on table.
2. Pick up the pile of cards. Remove the first card from the set and place it face up near where the pile was. This card is called the *pivot*.
3. Flip over the top card in your hand and compare to the pivot card. If the card is less than the pivot, place it face down to the left of the pivot; if the card is greater than the pivot, place it face down to the right of the pivot. Repeat for remaining cards in hand, forming two piles on either side of the pivot card.
4. Choose any remaining unsorted (face down) pile and repeat steps 2 and 3 (tip: when you lay down each new pivot card, leave yourself plenty of space on either side to place your new unsorted piles).
5. Repeat step 4 until all cards are face up. The cards are now in order.

Shuffle cards before trying the next sorting algorithm!

Sort C

1. Place the cards in a row face down.
2. Flip over first card and next card and compare them. If they are out of order, swap them, and put them face down again. If they are in the right order already, just put them face down again.
3. Advance one card, and repeat step 2. When you reach the last card, start over again from the first card.
4. Repeat steps 2-3 until you get through the entire set of cards without performing any swaps. The cards are now in order.

Names of the sorting algorithms:

Sort A: Selection sort

Sort B: Quicksort

Sort C: Bubble sort