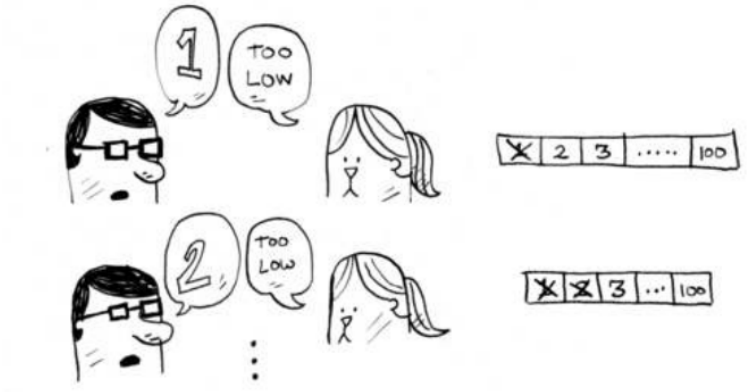
Binary Search and Selection Sort

Binary Search

Trying to guess a number from 1- 100.

The inefficient approach.

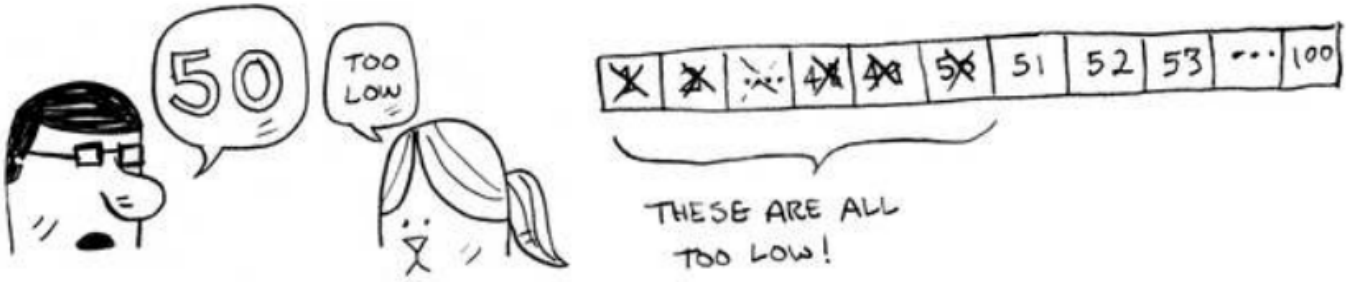


Suppose you start guessing like this: 1, 2, 3, 4 …. Here's how it would go.

This is *simple search* (maybe *stupid search* would be a better term). With each guess, you're eliminating only one number. If my number was 99, it could take you 99 guesses to get there!

Binary Search

Here's a better technique. Start with 50.



Too low, but you just eliminated *half* the numbers! Now you know that 1–50 are all too low. Next guess: 75.

Selection Sort

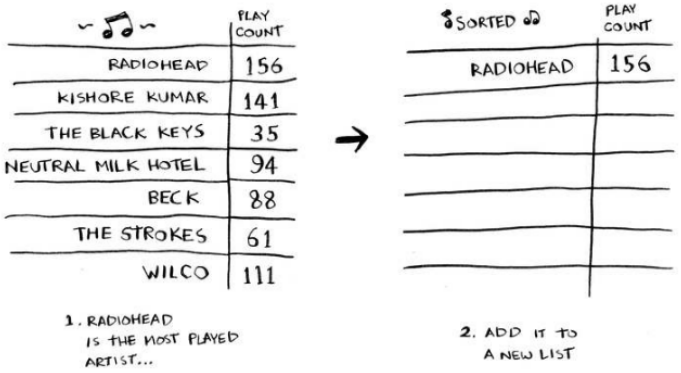
Suppose you have a bunch of music on your computer. For each artist, you have a play count.

	PLAY COUNT
RADIOHEAD	156
KISHORE KUMAR	141
THE BLACK KEYS	35
NEUTRAL MILK HOTEL	94
BECK	88
THE STROKES	61
WILCO	111

You want to sort this list from most to least played, so that you can rank your favorite artists. How can you do it?

Selection Sort

One way is to go through the list and find the most-played artist. Add that artist to a new list.



Do it again to find the next-most-played artist.