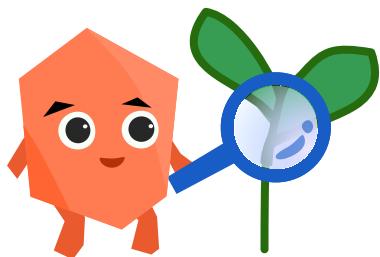


Animal Linear Search

Detective Mode

Are you ready to be a detective for the day? Join Ansel on a mission to search through information with the linear search algorithm!

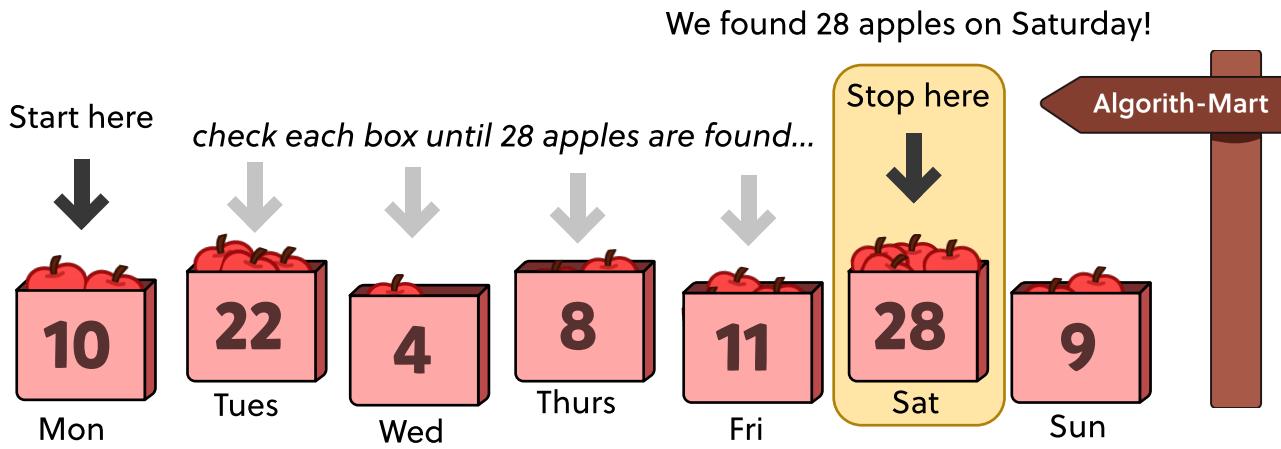


What is a Linear Search?

In computer science, a linear search is the **simplest** algorithm to search for something in a list. The search begins by checking each item in a list from **beginning to end** until a certain item is found.

Take a Walk to Algorith-Mart!

Let's take a look at an example. Below is a list of apples sold at Algorith-Mart last week and Ansel wants to find the day they sold 28 apples. Using linear search, we start on 10 apples sold from Monday and go down the list until we find 45 apples sold, which is on Saturday!



Note: We wouldn't check Sunday because we already found what we were looking for!



Why is Linear Search Important?

As shown in Algorith-Mart, we can use linear searches to **sort through a list of information** in a simple way. For instance, we may want to find a specific food item in a grocery list. Or, we may want to find the highest number of soccer goals made in a match!

Animal Search

Below is a list of 10 animals. Fill in the star next to **only one** of the animals. That animal will be the one you are searching for!

Eli the Eagle	★	Belle the Bear	★
Dixie the Dog	★	Sal the Snail	★
Rex the Rabbit	★	Ben the Beaver	★
Leo the Lion	★	Coco the Cat	★
Will the Whale	★	Paris the Pig	★

Next, cut out the 10 animal labels below and place them in a cup. Have a friend choose a random animal from the pile until they draw the animal with a star!

Perform 3 trials and record how many draws you took.

Trial #1	Trial #2	Trial #3
Draws taken: _____	Draws taken: _____	Draws taken: _____



Reflection

Awesome job, you just performed linear search by drawing each animal one-by-one until the starred animal was selected! Based on your experience, brainstorm 2-3 advantages and disadvantages of linear search in the table below.

Advantages	Disadvantages