

11 Search, Sort, and Index Lists

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1 Search, Sort, and Index Lists

1.1 Search

In the last notebook, you learned how to find what item was stored at a specific index. Now, given an item, find out its index.

Run the code

What index is Sophia at?

What index is “Scott” at?

```
[1]: using System;
using System.Collections.Generic;
var names = new List<string> { "Sophia", "Ana", "Jayme", "Bill" };
string name = "Ana";
var index = names.IndexOf(name);
Console.WriteLine($"Found {name} at {index}");
```

Found Ana at 1

1.2 What does -1 mean?

If `IndexOf()` returns -1, then that means it couldn't find the item in the list. In fact, you can make a little if statement that works in not finding the item:

Run the code.

Try out a few different names.

```
[2]: var names = new List<string> { "Sophia", "Ana", "Jayme", "Bill" };
string name = "Scott";
var index = names.IndexOf(name);
if(index == -1){
    Console.WriteLine($"{name} not found");
} else {
    Console.WriteLine($"Found {names[index]} at {index}");
}
```

Scott not found

1.3 Sort

Until now, you've just been putting in names in a random order. But sometimes it's nice to have a list be sorted. `Sort()` takes a list and organizes it. It looks at the variable types and organizes in the most reasonable way it can see - if it's strings, it sorts alphabetically, if it's numbers it organizes from smallest to largest.

Note that you don't need to write `sortedList = names.Sort()`, you just have to write `names.Sort()`. `Sort()` changes the list itself and you don't have to save the action to a new object.

Run the code!

Feel free to add in any other names to see them get sorted.

```
[3]: var names = new List<string> { "Sophia", "Ana", "Jayme", "Bill" };
Console.WriteLine("Pre Sorting:");
foreach(var name in names )
{
    Console.WriteLine(name);
}

names.Sort();

Console.WriteLine();
Console.WriteLine("Post Sorting:");
foreach(var name in names )
{
    Console.WriteLine(name);
}
```

Pre Sorting:

Sophia
Ana
Jayme
Bill

Post Sorting:

Ana
Bill
Jayme
Sophia

[]: